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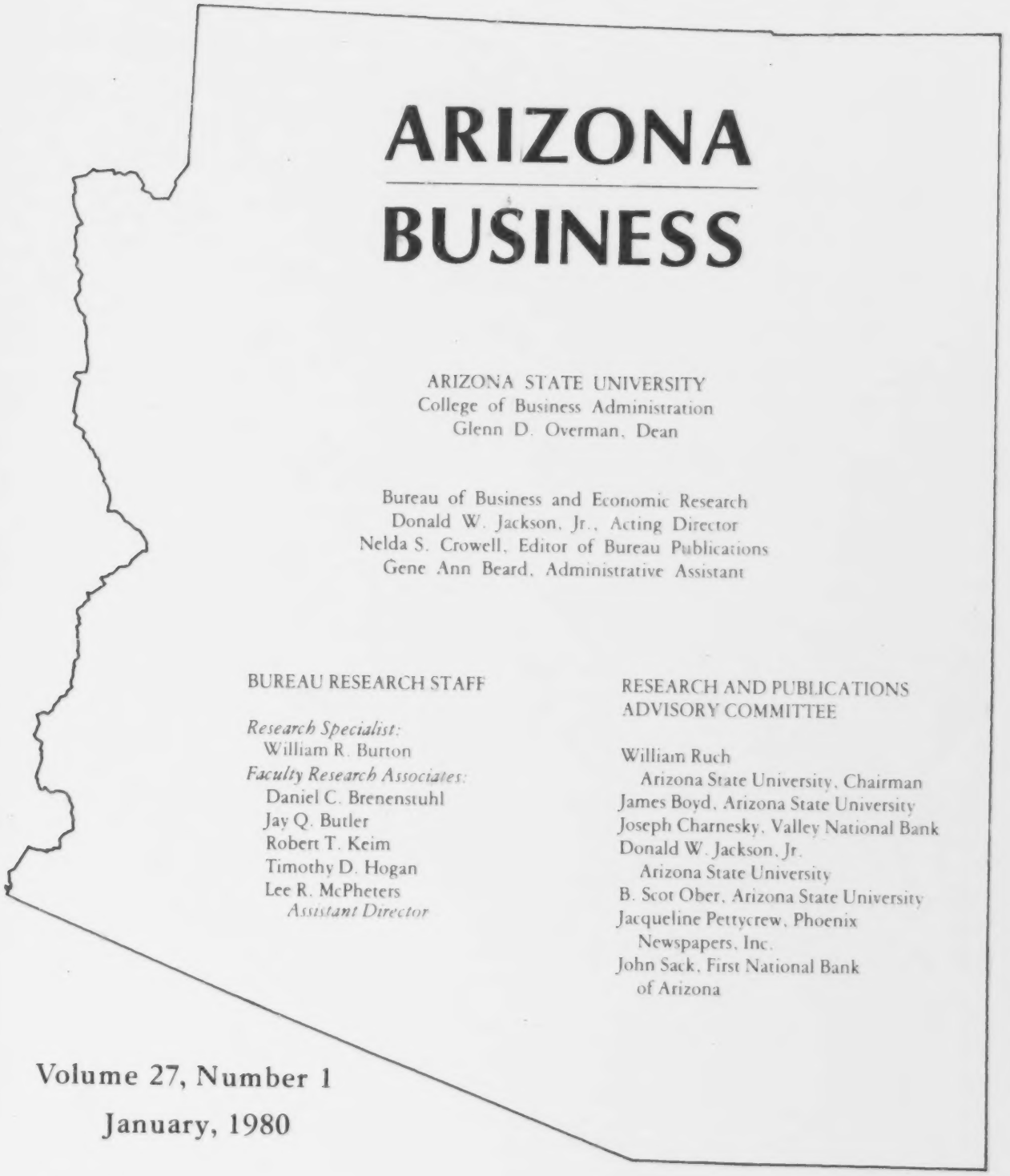

ARIZONA BUSINESS

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In This Issue

New Directions in the
Residential Real Estate Industry 3
Timothy S. Mescon
Sheila A. Adams

Industrial Relations in
Arizona Agriculture 7
Harold C. White
William Gibney

Changing Patterns of
Air Transportation in the Pacific 13
Marjorie Penseyres
Martin T. Farris

Doctoral Dissertation Abstract:
College of Business Administration 22
James Richard Cooley

The Arizona Business Scene
Arizona Copper:
Improving Conditions in a Key Industry 23

Arizona Sales of Electrical Power 25

A Survey of Arizona Business Conditions 26
Harold Fearon

Arizona Building Permits:
Monthly Report, November 28

Arizona New Housing Starts:
Monthly Report, November 30

Maricopa County Monthly
Retail Food Prices, December 31

Arizona Economic Indicators 32

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Report To The Reader

The year 1980 marks the twenty-fifth anniversary of the College of Business Administration at Arizona State University. In honor of the occasion, a series of public programs is scheduled for Wednesday, February 20.

Throughout the morning and early afternoon, special seminars are being held in the College of Business Administration on various timely issues of current interest to the business community. Topics will include such areas as accounting, business law, economics, finance, management, marketing, and quantitative methods.

Highlight of the day will be a special lecture by the internationally acclaimed authority on management, Dr. Peter Drucker. The program, which will be held in Grady Gammage Memorial Auditorium at 3:00 p.m., is open to the public free of charge. Parking will be provided in the lots east of the College of Business Administration.

Drucker is the author of *The Practice of Management*, a classic text in the field of management, as well as numerous other best-selling books. His newest book, *Managing in Turbulent Times*, is scheduled for publication this year by Harper & Row.

Professor Drucker has been Clarke Professor of Social Science and Management at Claremont Graduate School since 1971. From 1950 to 1972, he was Professor of Management at the Graduate Business School at New York University, which he still serves as Distinguished University Lecturer.

Dr. Drucker's presentation is part of the Lincoln Lecture Series, designed to bring the university and the community, speakers who are recognized authorities in the field to discuss emerging technical and social concepts and their implementation for business management.

In addition to the special events on February 20, the silver anniversary will also be the occasion for a special issue of *Arizona Business* that will appear next month. Featured articles will include a twenty-five year review of the economy, a twenty-five year review of the real estate industry, and an update on the nonstandard workweek.

New Directions in the Residential Real Estate Industry

TIMOTHY S. MESCON
SHEILA A. ADAMS

The residential real estate industry frequently has been regarded as an aggregation of rather small, individually owned and operated offices. This historical fragmentation of the industry has often cast the real estate broker in an adversary position. In an occupation sometimes regarded with a degree of suspicion, the residential broker has long struggled to achieve professional standing in the world of work.

Today, however, the residential real estate industry, because of its broader composition and complexity, has experienced some rather drastic changes in the structure of the business.

At present, the residential real estate industry supports over one million Americans, including some 500,000 active sellers of real property. In the state of Arizona alone, approximately 280,000 people are actively engaged in selling real estate. Indeed, during the past ten years, the broker-to-sales-associate ratio has increased from 1-to-2 in Arizona to 1-to-7. In the United States, this mammoth sales force collectively sold 4.8 million single family homes and approximately 350,000 condominiums and cooperatives during 1978. Total revenues generated in 1978 were expected to exceed $250 billion, yielding gross commissions of $15 billion.[1] By way of comparison, in the city of Phoenix alone, nearly $700 million were generated in 1978 through the sale of single-family homes and townhouses. Of that total, $630 million (93 percent) came from the sales of single-family homes.

The explosive growth of the industry has created tremendous burdens upon the small, independent entrepreneur. Many feel that brokers with small independent operations have seen their position in the industry slowly erode.

Walter Hall, Jr., President of the Hall Institute of Real Estate in Hanover, Massachusetts, anticipates drastic changes in the real estate industry because of franchising and the entry of large corporations into residential sales. Hall predicts that 70 percent of the brokers in business today will, in the not too distant future, be out of work. He forecasts that 90 percent of all transactions in the industry in thirty major market areas will be controlled by large firms: 40 percent by franchisees, 30 percent by giants, and 20 percent by large independents.

He notes that evidence of this trend is already in market statistics. As an example, he cites a Multiple Listing Service (MLS) in Massachusetts where there are no franchised brokers. In that market, surveys reveal that 54 percent of business is being generated by 16 percent of the MLS members. Yet a similar study made

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Franchising and management relocation services are important developments that have changed the complexion of the residential real estate industry. This article explores these trends and suggests implications for the future as these services expand.

Sheila A. Adams and Timothy Mescon are faculty members in the Department of Management, College of Business Administration, Arizona State University.

in a California community where franchised brokers are in abundance, reveals that 50 percent of the market is controlled by franchised operations; 25 percent is controlled by six medium size independents. The remainder is controlled by 400 small independents who are having trouble staying afloat.[2]

The fact that in one region 400 small independent firms vie for 25 percent of the local realty market tends to illustrate the inroads the larger firms are making in residential sales.

"Almost every study that has ever been done," says Kenneth Berg (former head of the New Jersey Real Estate Commission who heads New Jersey based Berg Enterprises, a publicly owned brokerage and mortgage company banker), "shows that in any significant market, 70 to 80 percent or more of the business goes to maybe 15 percent of the brokers."[3]

While the pronouncements of these experts ostensibly portend a bleak future for the small independent, it is important to recognize that there are literally thousands of smaller firms in the industry today that in the long run will probably not disappear but will simply remain small but, nevertheless, solvent.

Art Bartlett, President of Century 21, the nation's largest national chain, envisions a permanent existence for the small independent broker. "The one-man office will always be there . . . this is a really good salesman who has been in the community a long time and works on referrals."[4]

A new variation on entries into the industry has recently emerged. While the small independent entrepreneurs continue their quest for financial survival, capital rich, diversified firms are finding real estate to be a potentially lucrative investment area. This influx of the outsider into the industry may indeed work to the advantage of the franchisors, a point that will be examined in a later section.

CORPORATE VENTURES INTO RESIDENTIAL REAL ESTATE

Early corporate entries in real estate were focused primarily on relocation management services designed to assist corporate transferees in selling previous homes and purchasing new homes. In 1979, more than 300,000 middle and senior level executives were relocated. The size of this market has enticed a number of companies to concentrate solely on the relocation segment of the real estate market.

Merrill Lynch Relocation Management, a subsidiary of the diversified financial services holding concern, has emerged as a dominant force in this lucrative field. Another is Homequity, a firm acquired by HH group, a management service firm based in Maryland. These two leaders face some vigorous competition from firms enjoying the financial support of parent concerns. Three viable contenders in the relocation business are Equitable Relocation, owned by Equitable Life; Executron, jointly owned by Sears Roebuck and Coldwell Banker (Sears owns 12 percent of Coldwell Banker), and Transamerica Relocation Service.

In late 1978, Merrill Lynch & Company moved to enter the residential real estate brokerage business with a new subsidiary, Merrill Lynch Realty Associates, Inc., headquartered in Stamford, Connecticut. While Merrill Lynch has not yet located in the Phoenix area nor has stated such intention, its activities illustrate the direction such corporate ventures are pursuing. The company envisions itself as a future leader in the real estate industry. Plans call for acquiring, within the next three to four years, some forty real estate brokerages expected to generate, by 1983, between $5 million and $10 million of aftertax profit. Basing these estimates on 5 percent of gross revenues, Merrill Lynch projects home sales between $1.7 billion and $3 billion.[5]

While previous action in the real estate industry has been primarily acquisition of existing firms or franchise chain development, Merrill Lynch plans to own individual firms jointly while retaining the original management team. The objective is to acquire 80 percent ownership of each firm. "Merrill Lynch isn't looking for brokers who are ready to cash in their chips, but rather for ambitious people so committed to their business that they will stay with them for at least ten years."[6] However, the firm has encountered some difficulty in pursuing this goal. Apparently, the independent brokerage owners remain vigorously opposed to yielding their personal autonomy to the new corporate invader. In its experience Merrill Lynch has found that such people are often the last to be acquired. They have confidence they will continue to prosper without Merrill Lynch's name or assets, and they value their independence. A typical attitude is expressed by Wesley Foster, Jr., President of Long & Foster Real Estate, the largest broker in the Washington area and one of the ten largest in the United States . . . this business is ours, and as much as they say they are going to make it autonomous, they still will be calling the shots."[7]

That statement provides a fitting prelude to the discussion of real estate franchising. While many brokers may not be willing, as Foster indicates, to release a controlling interest in their firms to a Merrill Lynch or a Transamerica, thousands have elected to pay

as much as $8,000 initially and 8 percent of gross sales yearly for the privilege of affiliating with a national franchise organization. These entrepreneurs have often consented to go so far as to remove their own names from the company title to be replaced with the name and logo of the franchisor. Why, in but a few years, have 10 percent (a conservative estimate) of all residential real estate firms in this country chosen to align themselves with a franchisor? And why are the ranks of franchisees growing at the rate of 30 percent per year?

FRANCHISING — THE STATE OF THE ART

In the United States today, there are over thirty real estate franchise chains. In the past twenty years, these chains have sold over 10,000 franchises, representing over $800 million in gross commissions. The mushrooming of the franchise appears to know no bounds, for real estate franchises are growing at a rate of 30 percent annually.

The largest of the franchisors is California-based Century 21, with 6,039 firms in forty-eight states and 1977 revenues of $21 million. In addition, there are four other major national franchises: Red Carpet Corporation of America with 1,200 firms in sixteen states; member-owned Gallery of Homes, Inc. with 778 affiliated brokers in forty-nine states; Electronic Realty Associates, Inc. with 1,650 firms in forty-six states; and Realty World Corporation with 1,147 firms in thirty-six states.

The rate of growth in this segment of the industry is startling. Red Carpet, founded by Anthony J. Yniquez in 1966, has grown from 121 franchises in 1971 to 1,200 today. Century 21 has grown from 150 franchises in 1972 to over 6,000 today.

Major franchisors represented in Arizona include Century 21 with 110 offices in the state; Red Carpet, with 60 offices; Electronic Realty Associates with 21; Realty Executives with 30; Gallery of Homes with 15; and Fifty States Realty with 13. The franchises (including about a dozen offices affiliated with smaller franchisors) account for an estimated 50 percent of sales in the state of Arizona. Although no figures are available for historical comparison, the consensus among local industry members is that franchising in Arizona is greatly increasing, particularly in share of market growth. Of 1,660 real estate broker-members of the Arizona Association of Realtors, approximately 250 are franchisees.

The increasing growth of franchising will substantially decrease the number of independent brokers, industry-wide. There will, however, according to Del R. Wall, Red Carpet Vice President, "always be a place for specialists." Both Wall and Art Bartlett, President of Century 21, agree that while the number of independents will diminish, the group most severely affected will be the larger, single-office firm. Indeed, according to Wall: "The average ten-licensee office will be hardest hit; in fact, it will be extinct in twenty years, because he (the owner) won't be able to keep up with the overhead." Bartlett echoes these sentiments by stating: "The one who will find it difficult is the office trying to maintain a sales staff and grow — and he's the guy who isn't going to make it."[10]

The franchisors themselves, advertise a number of benefits available to the franchisees, all of which may be shared by the "independent owner-operator." For example, license training, recruiting, seminars, management development, homeowner warranties, and name identity, are but a few of the advantages touted by national franchisors to prospective franchisees. Franchise fees ranging from $500 to $7,900 are required for obtaining access to the benefits offered by national chains. Terms of the agreements vary significantly from firm to firm.

Franchise fees are somewhat taxing on the small broker. Besides the franchise acquisition fees, there is a yearly assessment of approximately 6 percent of annual gross on the individual agency in addition to as much as another 2 percent of gross contributed to advertising. It has been frequently argued that "the franchisors offer the brokers who join them the same kind of recognition, training, and advertising benefits that are enjoyed by the local McDonald's or Kentucky Fried Chicken unit."[11] Most franchisors offer benefits that were previously unattainable to the small independent such as training, proven sales materials, local, regional and national advertising support, and marketing research on trends in the industry. Other advantages often expressed include options to purchase office supplies, stationery, and standardized office forms at bulk rate prices. Additionally, access is provided to services such as financing, insurance, and escrow as well as intersectional or even intercontinental referrals, which allow the individual broker the opportunity to enter the corporate relocation business. In 1977, the Employee Relocation Council estimated that large United States corporations transferred more than 300,000 employees to new locations. These transferees were collectively worth over $1 billion in brokers' commissions.

In evaluating these advantages, Saul Ruch stated: "For an independent broker who wants to open an of-

fice in a new area where he is not known, . . . he immediately becomes a name where it would take many years to establish a name independently."[7] Voicing agreement with these sentiments concerning national affiliation, is James A. Riggs, former Editor of *Better Homes and Gardens* and Director of Meredith Corporation's Better Homes and Gardens Real Estate Service, ". . . a little broker, a guy just starting out, can buy instant national identity."[8]

The appeal to date has been enormous, and at a growth rate approximating 30 percent yearly, the demand for franchises is scarcely waning.

CONCLUSION

The perception of the real estate industry as a collection of small, individually owned and operated firms has drastically changed in the past few years. Today over one million Americans are directly involved in the residential real estate industry.

The allure of investing in this industry has attracted a number of corporate "giants" interested in acquiring local firms.

Perhaps the greatest impact made on the industry in recent times can be credited to franchising. Today, there are over thirty real estate franchise chains that represent over 10,000 franchisees, and numbers are growing at a rate of 30 percent annually.

The impact of these changes in the industry on the independent has not yet been determined. However, it is still expected that the individual broker willing to offer extraordinary services to potential buyers and sellers will be a fixture in the residential real estate industry for many years to come.

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[1]Peter S. Kilburn, "Corporate Giants Invade the Residential Market," *New York Times*, (February 4, 1979) Section 3, p. 1.

[2]"Chain Brand-Name Brokers Will Soon Dominate the Industry," *Real Estate Insider Newsletter*, (August 11, 1975) p. 1.

[3]Lawrence Minard, "Why George Babbitt Should be Smiling in His Grave," *Forbes*, (September 4, 1978), p. 43.

[4]Terence M. Green, "Franchises Held Unlikely to 'Take Over' Industry," *Los Angeles Times*, (November 14, 1976) Section VII, p. 1.

[5]"Merrill Lynch Holds Talks to Acquire Control of 10 Realty Brokerage Firms," *Wall Street Journal*, (September 27, 1978) p. 19.

[6]Charles G. Burck, "Why Merrill Lynch Wants to Sell You a House," *Fortune*, (January 29, 1979) p. 88.

[7]Ibid.

[8]Terence M. Green, "Training Stressed as Major Benefit to Franchisees," *Los Angeles Times*, (November 21, 1976) Section VII, p. 1.

[9]Ibid.

[10]Ibid.

[11]"Franchising the Local Realty Broker," *Business Week*, (September 13, 1976) p. 73.

[12]Green, "Training Stressed as a Major Benefit" p. 1.

[13]"Franchising the Local Realty Broker," p. 73.

Industrial Relations Legislation In Arizona Agriculture

HAROLD C. WHITE
WILLIAM GIBNEY

The Agricultural Employment Relations Act passed by the Arizona legislature became law in August 1972.[1] It was a historic action: The law was the first industrial relations act concerned with agricultural workers passed in the United States. In June, 1979, its historic significance increased when the United States Supreme Court ruled that the act was constitutional.

The act has been highly controversial. Debate in the legislature prior to passage was heated. Passage of the law generated attention in the press; conferences and public gatherings were held; studies were conducted by government, civic, and religious groups. In fact, signing the act into law was the force behind the recall movement of Governor Jack Williams.

In practice, however, the law has largely gone ignored. An observer of Arizona industrial relations commented that the law's existence has been one of the state's best kept secrets. When the California agricultural labor law was passed three years later, one national news magazine incorrectly observed that the California law was the first of its kind in the nation. With the recent Supreme Court ruling, the Arizona agriculture labor relations law can be expected to take on new meaning.

Congress has long recognized the rights of employees to join labor unions and to bargain collectively with their employers. However, the National Labor Relations Act (NLRA) states, "The term 'employee' . . .shall not include any individual employed as an agricultural laborer. . . ."[2] The exclusion does not prevent farm workers from organizing, nor does it prevent farm labor unions and growers from bargaining, but it does mean that the parties are not subject to the supports and limitations of the federal legislation.

Federal labor law was created, in part, to balance the bargaining power between labor and management and to provide a peaceful means for union organizing. From time to time, bills have been unsuccessfully introduced at the federal level to include farm workers. The Arizona legislature acted to fill the void left by Congress. In addition to California, two other states, Idaho and Kansas, have passed agricultural labor legislation. Arizona has generally not been favorable to unionization; it is a right-to-work state, for example. Not surprisingly, therefore, the Arizona labor law has been highly criticized by many social, religious, and labor groups, most notably the United Farm Workers

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The U.S. Supreme Court recently ruled that Arizona's Agricultural Employment Relations Act was indeed constitutional. This article explores the various aspects of the law that were reviewed by the Supreme Court: union access to workers, compulsory arbitration, consumer boycotts, criminal penalties, and election procedures.

William Gibney is General Counsel for the Arizona Agricultural Employment Relations Board. Harold C. White is Professor of Management in the College of Business Administration, Arizona State University.

union (UFW), particularly in the areas of union access to workers, compulsory arbitration, boycott limitations, criminal penalties, and election procedures.

CONSTITUTIONALITY OF THE LAW

Two days following the effective date of the Arizona law in 1972, the UFW filed suit in federal court charging the law was unconstitutional based on the claim that the law violated first amendment rights of freedom of speech and assembly. The union did not pursue the suit until the following year, however. The UFW had boycotted Safeway stores with the intent that in turn the firm would pressure lettuce and grape growers not to hire Teamster union members. Customers were requested not to shop at Safeway. The Agricultural Employment Relations Board determined that the Maricopa County Superior Court had erred in ruling that the boycott was legally conducted. With the board action against the UFW, the union decided the time was appropriate to pursue the suit against the law.[4]

Ultimately, the three-judge panel of the United States District Court heard testimony,[4] and in April, 1978, approximately six years after the suit was filed, ruled that the Arizona labor relations law was unconstitutional "in its entirety."[5] The court stated the law overall was flawed by undue restrictions and perverted the right of workers to organize and bargain. Furthermore, the board was enjoined from further activities.

The state appealed the decision,[6] and in January, 1979, the United States Supreme Court began hearing briefs on the appeal.[7] The significance of the case is indicated by the fact that sixty-one groups presented briefs as "friends of the court."

In early June, 1979, the Supreme Court ruled that the Arizona Agricultural Employment Relations Act was constitutional. The lower court decision was reversed.[8] The Supreme Court dealt mainly with the issues emphasized by the District Court in rendering its decision. On two of the issues — union access to workers for organizing purposes and compulsory arbitration — the high Court stated that the federal court had no jurisdiction because while the wording was ambiguous, the provisions were not unconstitutional. The Court determined that it must abstain from ruling until interpretations are made by the board and the courts. On two other issues — boycotts and criminal penalties for violation of the law — the Court agreed that the issues did pose constitutional questions, but that they must first be brought before the Arizona courts. The final issue concerned election procedures, which the justices concluded was not a constitutional matter. The state legislature was not required to provide for election procedures; therefore it woud be inapproporiate to strike down whatever procedures were provided under the law.

The United Farm Workers union (UFW) has been the most active union in Arizona, as well as in the rest of the United States, in its attempt to organize agricultural field workers. In its expression of dissatisfaction with the Arizona law, the UFW has not used the legal procedures provided by the law. Furthermore, as acknowledged by the Agricultural Employment Relations Board during the early years of the act, the growers were able to obtain more prompt action for injunctive relief directly from the courts, rather than going through the board.[9] Therefore, the bulk of the agricultural labor-management legal activities have been with the courts, not with the board. While the board has been used more frequently since 1975, in fact the board and the act itself have been little tested.

It is useful to review some of the implications of the points reviewed by the Supreme Court in its decision, a decision that has an impact beyond the state of Arizona. It had been rumored that the UFW had planned to challenge the agricultural labor acts in Idaho and Kansas had the Arizona law been ruled unconstitutional. Other states are currently debating similar legislation, and the court ruling will undoubtedly influence the deliberations of those legislatures.

UNION ACCESS TO WORKERS

The United Farm Workers union has been concerned about the lack of opportunity available under the Arizona law to contact farm workers on grower property for organizational purposes. The act states:

> No employer shall be required to furnish or make available to a labor organization . . . facilities to enable such . . . labor organization . . . to communicate with employees of the employer. . . .[10]

Although much of the wording of the Arizona law is taken directly from the federal NLRA, the above wording is not contained in the federal law. The National Labor Relations Board (NLRB), the adminstrative agency for the federal act, as well as the courts have held that the test for union access to workers is determined by the opportunity of the labor organization to carry its message to the employees.

Since passage of the Arizona law, permission for union representatives to visit farm workers on employer property has been tested numerous times in the courts.

In general, the right of the union to have organizers visit workers on the grower property has been upheld, although typically without the level of freedom desired by the union. The courts have not been consistent as to either the number or time periods permitted the organizers.[11] With the high Court interpretation, it can be expected that the courts will remain at least as liberal as they have been in the past; the agricultural labor board appears to lean toward federal interpretation of the Arizona law. Overall, the result should be frequent and controlled union access.

COMPULSORY ARBITRATION

Arizona law calls for "substantial and irreparable injury" to the grower before an injunction can be obtained to restrain a union from organizational activities. Such a condition can be shown rather readily in agriculture, especially at the time of harvesting. The act specifies:

> In the case of a strike or boycott; or threat . . . the court may grant, and upon proper application shall grant as provided in this section, a ten-day restraining order enjoining such a strike or boycott, provided that if an agricultural employer invokes the court's injunction . . . must as a condition thereto agree to submit the dispute to ***binding arbitration*** (emphasis added) as the means of settling the unresolved issues. In the event the parties cannot agree on an arbitrator within two days after the court awards a restraining order, the court shall appoint one to decide the unresolved issues.[12]

Compulsory arbitration has been a controversial issue for many years. The federal Railroad Labor Act requires arbitration under certain circumstances, but the practice has been criticized by some people in both management and labor. Proposals have been made to include arbitration under the NLRA, but never with sufficient support in Congress to be passed.

Some Arizona growers, in support of injunctions and arbitration, have pointed out the similarities of the Arizona provisions to those of national emergency legislation for labor disputes under federal law. However, requirements for arbitration in the federal and Arizona laws do not allow direct comparison. Under the NLRA, there is the requirement for "a threatened or actual strike or lockout affecting an entire industry or a substantial part . . . (that will) imperil the national health or safety." Injunctive relief is called for by the President of the United States and only after a report is submitted by a board of inquiry. Under the Arizona law, injunctive relief is sought by an individual farmer directly through the courts.

While it would appear that in the Arizona law arbitration has been designed to resolve issues in a fair and expeditious manner, the UFW has found the requirement objectionable and prefers to leave the issues to the bargaining process.

CONSUMER BOYCOTTS

Unlike the issues of union access to workers and compulsory arbitration, the Supreme Court ruled that consumer boycotts and criminal penalties were indeed constitutional in nature, but that they must first come before the state court before appeal is made in the federal courts.

Limitations concerning boycotts in the Arizona law[13] have been strongly criticized by the UFW in the past. Under federal law, the primary boycott is legal, permitting strikes, picketing, and other concerted activities by unions that are directed against an employer with whom the union has a direct dispute. Secondary boycotts are illegal including strikes, picketing, and other activities directed against an employer with whom it has no dispute. Typically the purpose of the secondary boycott is to persuade or coerce the employer to stop doing business with, or to bring pressure against, the employer with whom the union actually has a dispute. Communicating to the public, as by picketing, is generally considered informative and not coercive. Potential customers can act on or ignore the information as they choose. As determined by the NLRB and the courts, no complete clarity exists as to what constitutes a lawful or unlawful boycott in specific cases.

Under the Arizona law, means are available to agricultural unions to "induce or encourage the ultimate consumer" to refrain from "purchasing, consuming or using" such products as long as the inducements are not made by "dishonest, untruthful and deceptive publicity."[14] The Arizona law appears consistent with the federal law by making the primary boycott legal and the secondary boycott illegal. However, the law further states that legal boycotting "does not include agricultural products of another producer or user of such trademark. . . ." It was charged by the UFW during the early 1970s that boycotted growers, mainly in California, had marketed their products under the labels of nonboycotted growers. Under Arizona law it is conceivable that the union would have to be involved in organizing all growers marketing under a common name if they were to carry out boycotting activities.

At one time, the boycott was a major organizing tactic of the United Farm Workers. The public became

aware of the UFW mainly through publicity obtained from its boycotting of grapes and other agricultural products.

The most publicized example of UFW boycotting in Arizona occurred in 1973 directed against Safeway supermarkets. The intent of the union was to pressure the chain to induce growers not to hire Teamsters union members. Certain picketing practices were held by the Maricopa County Superior Court to be illegal.[15] The union was permitted to request that customers not purchase Teamster processed grapes and lettuce (a primary boycott), but the union was not permitted to request that customers not shop at Safeway stores (a secondary boycott).

On appeal, however, the Superior Court ruled the Arizona law was unconstitutional in part by limiting freedom of speech. As a consequence, the UFW was allowed to encourage customers to refrain from shopping at the stores as long as the communication was made orally on a person-to-person basis. Upon request of Safeway, the agricultural labor board intervened, taking the view that the court's ruling was inappropriate, drawing on the Supreme Court conclusion that picketing in conjunction with discussion was beyond the normal definition of freedom of speech. It was therefore argued that the law was constitutional and the union was conducting an illegal secondary boycott. The board's application was ultimately denied.[16]

As time had passed, the boycott has taken on less importance for the UFW. In 1974, the UFW nationally agreed to discontinue storewide boycotts. Previously some unions had been reluctant to support UFW storewide boycotts because of the adverse effect on members of other unions employed by the affected stores. The AFL-CIO and its affiliated unions agreed to support boycotting of products only. Certain conflicts remained in the union movement, however. Much UFW boycotting was directed against the Teamsters union as well as against growers.[17]

Major organizing efforts of the UFW since the early 1960s have been directed toward farm workers in California. The passage of the California labor relations act in 1975 improved the situation of the UFW. Means were established for recognition elections, and the UFW was more successful in organizing the farm workers than were other labor unions.

Much boycotting had been directed toward jurisdictional disputes between the UFW and the Teamsters union. In 1977, following four years of intermittant discussions, agreement was reached between the UFW and the Teamsters whereby the UFW would have jurisdiction of field workers and the Teamsters would have jurisdiction over such employees as those in commercial packing sheds and off-farm crop transportation.[18]

With the legal election procedures working to their advantage and with less jurisdictional competition, the UFW had less need for boycotts for grower acceptance of the union. In early 1978, the United Farm Workers union announced that it was ending formal farm product boycotts, some of which had extended for at least eight years.[19]

CRIMINAL PENALTIES

Another issue that the high Court determined should first be tested in the state court concerned criminal penalties for acts contrary to the agricultural labor law. The UFW has expressed concern that anyone carrying out boycott practices should be held subject to penalties under the law, and the union, even if it did not authorize certain actions such as illegal boycotts, would be penalized. Penalties range up to one year in prison for violators and fines to $5,000. Fines can be imposed on individuals and unions.

The General Counsel for the agricultural labor board has also been especially critical of this portion of the act. In practice, penalties have never been utilized, and the board has supported the concept of amending the law to remove the penalties.

ELECTION PROCEDURES

The final issue with which the Supreme Court dealt was the election procedure. Their conclusion was that constitutional issues were not involved, but that action was to be determined by the legislature.

Several factors were involved. Wording of the "rights" of employees as given in the Arizona law is almost identical to that found in the NLRA:

> Agricultural employees shall have the right to self-organization, to bargain directly for themselves, and to form and join or assist labor organizations to bargain collectively through representatives of their own free choosing, or to engage in lawful concerted activity for the purpose of collective bargaining or to the mutual aid or protections, and . . . to refrain from any and all such activities.[20]

However,

> "Agricultural employee, permanent" means any employee over sixteen years of age who has been employed by a particular agricultural employer for at least six months during the preceding calendar year.

. . . "Agricultural employee, temporary" means any employee over sixteen years of age who is employed by a particular agricultural employer and who has been so employed during the preceding calendar year. . . .[21]

"During the preceding calendar year" could limit eligibility to vote in organizational elections only to those employed both the previous and current years by a single grower.

A further limitation: " 'agricultural employee' does not include any individual . . . who quit. . . ."[22] The very nature of the industry, however, results in constant movement by the majority of farm workers as the harvest progresses. The definition of employee, therefore, appears open to challenge and calls for clarification.

For an election to be held, a petition signed by 30 percent or more of the workers in the work unit is to be presented to the agricultural labor board.[23] The UFW has been especially critical of the means of election. Arizona law states that union representation is to be determined by secret ballot.[24] Petition and secret ballot is one approach available under federal law. However, the NLRA does not demand a specific procedure for employees to make their choice, but only that the means used will assure free choice.

Initially the UFW indicated a preference for the grower and union to reach agreement without use of the election process. However, the UFW eventually found that it was not always successful with this approach, especially in competition with the Teamsters union,[25] and in California under the agricultural labor act the UFW has experienced considerable success with the election process.[26]

Nevertheless, the UFW criticism of the Arizona election process has continued. For example, the union has expressed concern that growers could use tactics to delay an election even though the law states, "such petition (to the court by the grower) shall not act to stay the election proceeding. . . ."[27] Therefore, even with the court injuction, the election should proceed without delay, and determination of the election could be made at the time of the ruling by the court.

There is a practical concern for the union nonetheless. Under NLRB procedures, three to four weeks can elapse from receipt of a petition to the date of election; contested procedures can extend the process for several months. Delays tend to work to the disadvantage of a union in any industry. Time is especially critical for unions attempting to organize farm workers due to the relatively brief period of time a seasonal worker is employed by a single grower. The 1979 lettuce strike by the UFW in California and Arizona lasted for seven months.[28]

The UFW has supported the California election procedure in marked contrast to its strenuous resistance to the Arizona law. Under California law, a representation election — certification or decertification — is held only when a stated percentage of normal seasonal work force is employed. This requirement avoids the possibility that growers or anti-union permanent employees would force an election during a low employment period of the year and vote to reject the union. Without such restrictions, the UFW visualizes that it might be forced to reorganize each season. Precedence from federal law would suggest that frequent elections, especially decertification elections, would probably not be permitted. Additionally, the Arizona agricultural labor board appears prepared to support legislation similar to that found in the California law, thereby overcoming some of the objections expressed by the UFW.

Over two years passed from the passage of the Arizona law until the first representation petition was filed. This is in sharp contrast to approximately 400 elections held in California within six months following passage of that act. At the end of the first fiscal year of the Arizona board, only three unfair labor practice charges had been filed, again in contrast to several hundred in California. It is recognized that agricultural employment is eight to ten times larger in California than in Arizona. Nevertheless, the board has had little opportunity to carry out its assigned functions: The UFW, the most active farm labor union, has refused to utilize the board; and for a year prior to the Supreme Court decision, the District Court had enjoined the board from functioning.

At one time, Cesar Chavez, UFW president, testified that during the life of the Arizona law, the UFW had lost membership in Arizona. However, he acknowledged that the UFW had decreased its organizational efforts in Arizona after the law was passed.[29] Since the Supreme Court decision, the UFW has indicated that there is little chance for the union to organize effectively.

The Supreme Court ruled in part on procedural grounds, rather than on the merits of the Arizona law; therefore the issues are not settled. The UFW is in a position to take its case to the Arizona Superior Court if they choose. Indeed, there is some indication that the provisions in the law concerning unfair labor practices and election proceedings will be tested by the union. The UFW has taken a strong position that the Arizona

Agricultural Employment Relations Act is a handicap to organizing and bargaining. During fall, 1979, the Arizona agricultural labor board began making changes in administrative procedures to bring Arizona practices closer to those found under the California act. It would seem, based upon previous criticism, that the changes should make the Arizona act more acceptable to the UFW. However, the law has not been truly tested.

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[1]For a review of the act see Harold C. White, "The Labor Unions in the Fields: The Arizona Labor Law," *Arizona Business*, 20 (October 1973): 17-26.

[2]National Labor Relations Act, Sec. 2(3).

[3]"Hearing Set on Safeway Request," *Phoenix Gazette*, July 21, 1973.

[4]"Farm Law Hurts Pay, 'Chavez Says'," *Arizona Republic*, January 19, 1976.

[5]United Farm Workers National Union v. Babbitt, 449 F. Supp. 449 (D.C. Ariz. 1978).

[6]"State Plans to Appeal Confusing Order Striking Down Farm Labor Law," *Arizona Republic*, April 27, 1978.

[7]"Arizona's Farm Worker Law Unconstitutional, Groups Say," *New Times*, January 16, 1979.

[8]Babbitt, Governor of Arizona, et al v. United Farm Workers National Union et al, U.S. Sup. Ct. no. 780225, decided June 5, 1979; Lois Boyles, "Justices Uphold Farm Labor Law," *Phoenix Gazette*, June 5, 1979; Donald Lowery, "U.S. Supreme Court Upholds State's Farm-labor Relations Law," *Arizona Republic*, June 6, 1979; Donald Lowery, "Farm-labor Law Dispute Goes On," *Arizona Republic*, June 10, 1979.

[9]Arizona Agricultural Employment Relations Board, *Annual Report*, Fiscal Year 1972-1973.

[10]Arizona Revised Statutes 23-1385.C.

[11]Examples of varied rulings see: "Restraint Placed on Union," *Phoenix Gazette*, April 5, 1973; "Deputies Ordered Not to Enforce UFW Injunction," *Phoenix Gazette*, July 7, 1973; "5 arrested in Yuma Melon Fields Melee," *Arizona Republic*, June 9, 1978; Rosalie Crowe, "Peace Marks Arizona Protest by Striking Farm Workers," *Arizona Republic*, March 16, 1979.

[12]ARS 23-1393.B.

[13]ARS 23-1385.

[14]ARS 23-1385.B.8.

[15]"Hearing Set on Safeway Request," *Phoenix Gazette*, July 21, 1973.

[16]Arizona Agricultural Employment Relations Board, *Annual Report*, Fiscal Year 1972-1973.

[17]"Teamsters Warn of Possible Retaliation if AFL-CIO Unions Back Farm Boycott," *Wall Street Journal*, April 18, 1974.

[18]"Unions Settle Farm Dispute in West," *Arizona Republic*, March 11, 1977.

[19]"Chavez in a Surprise Move Calls for End to Long Standing Farm Workers Boycott," *Wall Street Journal*, February 1, 1978.

[20]ARS 23-1383.

[21]ARS 23-1382.1.

[22]ARS 23-1382.1.3.

[23]ARS 23-1389.C.1.

[24]ARS 23-1389.A.

[25]"AFL-CIO Back Limited Lettuce, Grape Boycott," *Wall Street Journal*, April 9, 1974.

[26]Ronald B. Taylor, "California Agricultural Labor Relations," *Proceedings*, Industrial Labor Relations Association, September 1976, p. 66-72.

[27]ARS 1389.F.

[28]"7 Month Lettuce Strike is Over," *Phoenix Gazette*, September 1, 1979.

[29]"Farm Law Hurts Pay, 'Chavez Says'," *Arizona Republic*, January 19, 1976.

Changing Patterns Of Air Transportation In the Pacific

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The movement of passengers and freight between countries is of great interest to many business people. From a national viewpoint, most of the current interest centers on the changing patterns of passenger service by air over the North Atlantic. This is natural, given the population and business configuration of the United States and the concentration of people and industry in the eastern seaboard and North Central States. Additionally, the United States has traditionally considered itself part of the Atlantic community of nations and has looked and traveled eastward with European nations.

Two recent factors, however, may be changing this traditional orientation. First, population and business shifts to the West and the South have challenged the East Coast and Midwest (North Central States) for commercial and economic supremacy. People, businesses, and economic organizations in the West and the South no longer feel the close attachment to Europe and the Atlantic community of nations. Indeed, they often look westward to the Pacific Basin for their orientation and future development.

Second, the Pacific nations have taken on added significance as trading partners with the United States in the last decade or two. Japan and the other nations of the Far East have become important suppliers of goods into the United States and are growing in importance as markets for United States goods. The Asiatic market potential is not only significant in total, but is of particular importance to Arizona and the Southwest.

Given the distances as well as the product mix of goods moved between the Southwest and the Pacific, air transportation in particular plays an important role in the business and economic relationships. The purpose of this article is to analyze the air transportation industry as it presently exists in the Pacific Basin, to note some of the potential benefits derived from this system, and to detail the rapid changes taking place in the air transportation structure in the Pacific Basin.

International trade in the Pacific region has experienced phenomenal growth in recent years. Because of Arizona's Southwest location, the development of this trade is of particular interest. This article analyzes the air transportation industry in the Pacific and discusses the potential impact of such developments as industry regulation and new Pacific markets.

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GROWTH OF INTERNATIONAL BUSINESS IN THE PACIFIC

In the last quarter century, the international business of the nation has grown remarkably as measured by dollar value of exports and imports. Table 1 shows United States exports increasing by 673 percent

TABLE 1

DOLLAR VALUE OF TOTAL U.S. FOREIGN TRADE
TOTAL U.S. AND U.S. TRADE WITH JAPAN, EAST-SOUTH ASIA,
AUSTRALIA-OCEANIA, 1955-1977
(millions)

	Exports							*Imports*						
Year	*Total U.S.*	*Japan*	*Percentage*	*East South Asia*[1]	*Percentage*	*Australia-Oceania*[2]	*Percentage*	*Total U.S.*	*Japan*	*Percentage*	*East South Asia*	*Percentage*	*Australia Oceania*	*Percentage*
1955	$15,547	$ 683	04.4	$1,495	09.6	$ 231	01.5	$11,384	$ 432	03.8	$1,165	10.2	$ 174	01.5
1960	20,576	1,447	07.0	2,207	10.7	514	02.5	14,654	1,149	07.8	1,258	08.6	266	01.8
1965	27,478	2,080	07.5	3,100	11.3	956	03.5	21,366	2,414	11.3	1,735	08.1	453	02.1
1970	43,224	4,652	10.7	4,030	09.3	1,189	02.8	39,952	5,875	14.7	3,397	08.5	871	02.2
1975	107,592	9,563	08.9	10,095	09.4	2,340	02.2	96,902	11,425	11.8	10,267	10.6	1,508	01.6
1977	120,163	10,522	08.7	10,698	08.9	2,877	02.4	146,817	18,623	12.7	17,783	12.1	1,720	01.1
Percentage increase	673	952		615		1,145		1,190	5,311		1,426		788	

[1]East-South Asia includes: Afghanistan, Burma, China (Taiwan), Hong Kong, India, Indonesia, Cambodia, Korea, Laos, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka (Ceylon), Thailand, and Vietnam (South).

[2]Oceania includes New Zealand, Western Samoa and other.

Source: U.S. Department of Commerce, *Statistical Abstract of the United States, 1978*, pp.876-879 for years 1960 through 1977; *Statistical Abstract of the United States, 1970*, p. 790 for 1955.

from 1955 to 1977 and United States imports increasing 1,190 percent during the same period. It should also be noted that the United States had an export balance of $4.2 billion in 1955 when exports of $15.5 billion exceeded imports of $11.4 billion. Now the United States has an import balance of $26.6 billion in 1977 with imports of $146.8 billion exceeding exports of $120.2 billion. Since all of these goods must be transported, these data are also a measure of the change in international transportation during that period.

Trade with the Pacific Region

Turning to the Pacific region, which is of greatest interest to Arizona, Table 1 also notes the changes in the value of exports to and imports from Japan, the East-South Asia region, and Australia-Oceania. In 1955, Japan accounted for 4.4 percent of United States exports and 3.8 percent of United States imports. East-South Asia accounted for 9.6 percent of United States exports and 10.2 percent of United States imports in the same year, and Australia-Oceania 1.5 percent of both exports and imports. Collectively, Japan and East-South Asia and Australia-Oceania made up 15.5 percent of United States exports and 15.5 percent of United States imports in 1955. The change in trade relationships with the Pacific Basin countries has been substantial in the last twenty-two years. In 1977, Japan was a market for 8.7 percent of United States exports and accounted for 12.7 percent of United States imports, up from 4.4 percent of exports and 3.8 percent of imports in 1955. The increase in absolute dollar volume was 952 percent for exports and a remarkable 3,310 percent for imports — far greater than the increase in United States exports and imports in general. The East-South Asia share of the export market dropped slightly from 9.6 percent in 1955 to 8.9 percent in 1977, although the dollar volume increased 615 percent. As a source of imports, however, that area increased from 10.2 percent in 1955 to 12.1 percent in 1977 with dollar volume showing an absolute increase of 1,426 percent. The Australia-Oceania share of the United States export market increased from 1.5 percent in 1955 to 2.4 percent in 1977, increasing in an absolute dollar amount by an astounding 1,145 percent. As a source of imports, however, that area's share dropped slightly from 1.5 percent to 1.1 percent, although the absolute dollar amount increased by 788 percent.

Collectively, Japan, East-South Asia and Australia-Oceania now account for 20.0 percent of United States exports (up from 15.5 percent in 1955) and 25.9 percent of United States imports (up from 15.5 percent in 1955). Clearly the nations in the Pacific Basin have gained in importance to the United States as both ex-

port markets and as a source of United States imports both absolutely and relatively in the last two decades.

Trade Through West Coast Ports

The dollar value of exports and imports passing through the Los Angeles and San Francisco customs regions during 1970 and 1977 relates these changes more closely to the western United States. A portion of the trade with Japan, East-South Asia and Australia-Oceania moves through Gulf Coast and East Coast points just as a portion of the trade moving through Los Angeles and San Francisco districts is to and from points other than the Pacific and East-South Asia regions.[1] However, customs data on West Coast points do tend to emphasize the importance of the Pacific market and are of some importance to Arizona since a sizeable portion of Arizona's international business goes through these customs. Los Angeles-San Francisco regions handled 17.2 percent of United States exports and 20.3 percent of United States imports in 1977.[2]

Air Freight in the Pacific

Concomitant with this growth of international business generally and the above average growth of the Pacific region as a trading partner has been the increasing importance of air freight as a part of United States trade. Percentagewise, air freight has grown faster as measured by weight in both exports and imports than ocean freight: 260 percent increase in air compared with 60 percent increase in vessel freight for exports; 550 percent increase in air compared to 136 percent increase in ocean vessels on imports.[3]

Turning once again to the Pacific region, an idea of the increase in the use of air freight in the 1970s when measured by value and by weight is impressive. By weight, aircraft carried 66 percent more export freight in 1976 than in 1970 and 95 percent more import freight in 1976 than 1970. By value, the increase was 186 percent for exports and 220 percent for imports during the same period.[4]

Although data by country are not readily available, data by continent are available. Air freight to and from Asia has increased faster for both imports and exports than the increase in air freight in general in imports and exports. Air freight weights to and from Asia have increased 169 percent for exports, compared to 66 percent for all air freight of exports; and 259 percent for imports, as compared to 95 percent for all air freight of imports between 1970 and 1976.[5]

As measured by value, the increase is even more spectacular: 347 percent increase in value of exports to Asia compared to 186 percent increase in value for all air freight exports, and 409 percent increase in imports by value from Asia as compared to 220 percent for all air freight imports by value.[6] It should be mentioned that Asia includes parts of the Middle East where substantial increases in movement by air freight have been going on in the 1970s.

Patterns and Trends

These data on the changing international trade situation reveal several important patterns: International trade of the United States has been increasing rapidly since the mid-1950s, and the share of both imports from and exports to the Pacific region has increased faster than increases in general. Specifically, Japan and the countries that comprise East-South Asia and Australia-Oceania now constitute almost 26 percent of United States imports and 20 percent of United States exports. The majority of this trade passed through the Los Angeles and San Francisco customs regions and is of direct concern to the growth of the Pacific Southwest region. Air freight of exports and imports has grown more rapidly than exports and imports in general, and air freight as measured by value (not weight) has become an important part of exports and imports. In particular, air freight to Asia has increased more rapidly than air freight in general for both exports and imports, and the growth of these trade relationships means air transportation both as a carrier of freight and of passengers is of increasing importance. All of these factors, which affect Arizona and the whole Pacific Southwest region, relate to the changes in air transportation patterns in the Pacific region as both passenger and freight carriers become important in the development of this region.

THE IMPORTANCE OF AIR TRANSPORTATION TO PACIFIC DEVELOPMENT

Turning to the Pacific Basin, two things are evident. First, it is obvious that considerable economic growth and development have occurred, and second, air transportation has played an unusually important role in this development.

Air Passengers and Equipment

One indication of the importance of air transportation is the number of passengers carried. Table 2 reports

the changes in number of passengers carried, both absolutely and relatively, for the period 1971 to 1975. The growth in passengers slowed all over the world during this period, and although total passengers increased each year, the percentage change for total world airlines dropped to 3.5 percent in 1975 over 1974. International Air Transport Association (IATA) airlines even experienced a decline in absolute number of passengers carried, partially due to a decrease in the number of airlines belonging to IATA. However, the nine airlines of the Orient continued to increase in number of passengers carried. Indeed, in 1975 the airlines of the Far East increased passengers 6.2 percent, almost twice the 3.5 percent increase for all airlines of the world for that year. Considered over a five-year period, the increase in passengers on the airlines of the Orient was 69.1 percent greater in 1975 than in 1971 — over twice as fast a rate of growth as the 31.5 percent change for all the airlines of the world. Clearly, the airlines of the Orient outpaced the other airlines of the world in passenger growth from 1971 to 1975.

TABLE 2

CHANGES IN WORLD AIRLINE PASSENGERS
1971-1975

	All World Airlines		*The IATA[a] Airlines*		*The Orient[b] Airlines*	
Year	*Number Millions*	*Percentage Change*	*Number Millions*	*Percentage Change*	*Number Millions*	*Percentage Change*
1971	333	—	252	—	23.0	—
1972	368	10.5	285	13.0	25.6	11.1
1973	404	9.8	314	9.9	33.3	29.7
1974	423	4.7	317	1.0	36.6	9.9
1975	438	3.5	316	(0.2)	38.9	6.2
Total 1971-75		31.5		25.4		69.1

[a]International Air Transport Association.

[b]Major airlines included: Cathay Pacific, China Airlines, Garuda Indonesian Airways, Japan Airlines, Korean Air Lines, Malaysian Airline System, Thai Airways International, Singapore International Airlines, and Air Siam which is no longer operating.

Source: Air Transport World, February 1977, p. 21.

This growth in traffic is also reflected by increases in equipment. These same airlines of the Orient, which now number eight since Air Siam is no longer operating, were flying more than fifty wide-bodied jets at the end of 1978. Equipment acquistions by these airlines have been important. During the 1970s, Japan spent more than $2 billion on United States aircraft and parts. Since 1976, Garuda Indonesian Airways has committed almost $1 billion to fleet expansion. During 1978, Singapore Airlines broke the previous record by placing a $900 million single order with Boeing Aircraft Company. Korean Airlines recently exceeded that record by committing $1.3 billion in orders and options covering eighteen B-747s.[9]

Distance and Geography

Another aspect concerns distance and geography. People and goods must be able to flow freely between developing and developed economies. The Pacific nations are separated from the United States by at least 6,000 miles. In addition, land areas in the region are separated into islands, archipelagos, and peninsulas, frequently making surface transportation circuitous. Since air transportation is not impeded by topography, it becomes the viable linkage for commerce between Pacific nations and their more distant trading partners.

Pacific distances have had both a positive and negative affect on the development of air service. From a positive standpoint, a long-distance route provides low per-mile operating costs. Aircraft efficiency and utilization are high while landing fees and other terminal costs contribute a smaller per-mile burden when distributed over a long-distance route.

A negative factor involves the commitment by a carrier to provide scheduled service. In airline economics, costs that are usually considered to be variable, such as fuel and labor, become fixed costs once the flight is scheduled. When a market is in its formative stages as Pacific routes have been, the risk of achieving less than a break-even load factor of long-distance travelers is evident. On the other hand, reducing schedule frequency or including several stop-offs to tap intermediate markets is a deterrent to demand as passengers seek more non-stop service.

Other Measures of Importance

A further measure of importance is freight revenue. Freight revenue earned by United States certified route scheduled air carriers on Pacific routes increased by 84 percent, from $129 million in 1973 to $238 million in 1977. This compares with an increase in freight revenues of 73 percent on Latin American routes and a 49 percent increase on routes serving Europe during the same period.[10]

Another measure of the importance of United States-Pacific air trade by value is the number of Pacific

nations that rank in the top twenty air trading partners of the United States. Air trade between the United States and its top twenty foreign trading countries totaled $24.6 billion in 1977. Pacific nations accounted for almost one-third of this total, and are in seven of the top twenty positions. Japan ranks second, preceded by the United Kingdom and followed by West Germany with $3.1 billion in air trade; Hong Kong ranked seventh with $1.2 billion in air trade.[1]

Pacific Air Cargo: Past, Present, Future

Another aspect of the importance of air transportation to development in the Pacific is how the airlines themselves see their future. *Air Transport World* asked the air carriers to furnish the following data on their cargo service: their present cargo in ton-kilometers, their increase in this figure for the past five years, estimates of increases during the next five years, their cargo revenues in 1978, increases in that figure for the past five years, and estimates of increases to come in the next five years. More than sixty domestic and foreign air carriers providing cargo service in all parts of the world, responded to the survey. In total these carriers accounted for an estimated 15.8 billion cargo ton-kilometers in 1978, yielding an estimated $4.9 billion in cargo revenue.

The survey data are by carrier, not by region, but by extracting information from the carriers serving the Pacific who responded, some idea of what these carriers foresee for the next five years can be found. Of course, some of these carriers serve cargo markets other than just the Pacific.

Table 3 indicates that these nine carriers, 15 percent of the number responding, handled an estimated 6.3 billion cargo ton-kilometers in 1978, 40 percent of the total reported. They recorded a 218 percent increase during the last five years, as compared with an 11 percent increase during the same period for all airlines responding. The nine carriers' cargo earnings in 1978, $1.4 billion, represent 28 percent of the $4.9 billion total reported. The increase in cargo earnings (221 percent) aligned with the increase in ton-kilometers (218 percent) indicating that the increased cargo revenue during the past five years was due to the expanding market for air cargo service, rather than to rate increases.

These carriers are optimistic about the growth of their air cargo service during the next five years. Their estimates of increase in cargo ton-kilometers range from 25 percent to 270 percent. All but one carrier forsee a percentage increase in revenue which is equal to, or exceeds, the forecasted increase in tonnage. This tends to indicate that rate increases may be affected, since the forecasted increase in cargo revenue exceeds the forecasted increase in ton-kilometers.

FREIGHT AND PASSENGER MOVEMENT IN THE PACIFIC: A PROFILE

In order to relate these developments to Arizona and the Pacific Southwest, some indication of cargo and

TABLE 3

AIR CARGO TRAFFIC AND REVENUES

Airline	*Estimated 1978 Cargo Ton/Kilometers (000)*	*Percentage Increase In Past 5 Years*	*Estimated Percentage Increase in Next 5 Years*	*Estimated 1978 Cargo Revenue (000)*	*Percentage Increase in Past 5 Years*	*Estimated Percentage Increase in Next 5 Years*	*Percentage of Total Revenue Derived From Cargo*
Flying Tiger	2,032,000	196	55	344,200	130	122	100
Garuda Indonesian	56,221	155	100	19,552	155	100	7
Japan Air Lines	1,200,000	60	70	300,000	120	60	20
Malaysian	92,663	780	270	25,878	470	270	13
Northwest	446,332	47	44	87,000	64	61	12
Pan Am	1,786,000	1	25	380,000	27	45	19
Qantas	291,000	95	88	90,000	214	190	12
Singapore	386,000	383	257	150,000	525	270	22
Thai International	n.a.	242	n.a.	52,500	288	n.a.	n.a.
Total	6,280,216	218	114	1,429,130	221	140	24
All Airlines Responding	15,797,952	11	63	4,891,714	78	59	13

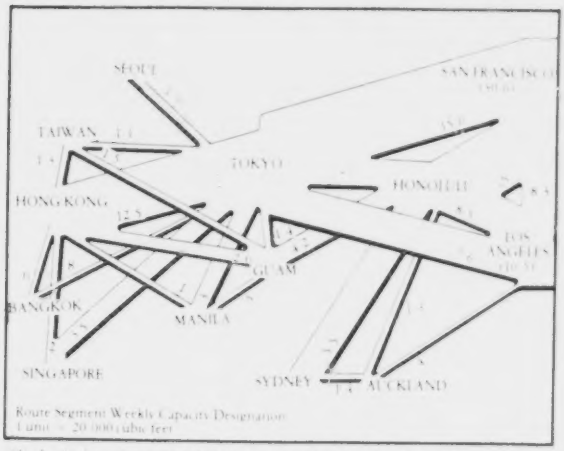
Source: Air Transport World, February 1979.

passenger capacity now leaving Los Angeles and San Francisco — the primary gateways for Arizona movement of goods and passengers — is needed.

Figure 1 was constructed by compiling direct and connecting weekly scheduled passenger and freight service from Los Angeles and San Francisco to major gateways in the Pacific. The capacity estimates are based on available space rather than weight, which is affected by many factors that can create wide variance. An estimate of cubic capacity was made for each aircraft type serving a route based on the number of available container/pallet positions and their average cubic capacity. This figure was multiplied by the number of flights made within a week by each aircraft type. Each 20,000 cubic feet of available cargo space was designated as one unit of route capacity.

FIGURE 1

WESTBOUND AIR CARGO CAPACITY



Flight Information: Official Airline Guide, April, 1979; *Air Cargo Guide*, March, 1979.

While Figure 1 is based on estimated averages, it clearly depicts the four Pacific cargo hubs and relative capacity of each route segment on westbound Los Angeles and San Francisco traffic; 30.6 units, each representing 20,000 cubic feet of capacity, move west from San Francisco and 16.5 units move west from Los Angeles. The capacity (8.3) available between Los Angeles and San Francisco is largely a function of carrier route patterns with either point serving as an intermediate or stop-off point on movements to Pacific locations.

Four Pacific Cargo Hubs

The four Pacific cargo hubs are Honolulu, Tokyo, Hong Kong, and Guam — points that also serve as intermediary stop-offs for traffic to each other.

Honolulu's position as a consuming center and midpoint in the Pacific attracts almost one half (23.5 units) of the total Los Angeles/San Francisco capacity (47.1). The remainder (24) move directly from San Francisco to Tokyo (15.6), and from Los Angeles to Tokyo (7.6), Auckland (.4), or on to Sydney. Traffic flows from Honolulu to Auckland (1.3), Sydney (5.5), Guam (4.2), and Tokyo (7).

Of the four hubs, Tokyo handles the most incoming westbound capacity. Traffic flows from San Francisco (15.6), Los Angeles (7.6) and Honolulu (7), which is the heaviest outbound flow from Honolulu. Outbound traffic radiates from Tokyo to Guam (1.4), Manila (3), Singapore (3.5), Bangkok (.8), Hong Kong (12.5), Taiwan (1.1) and Seoul (1.9).

Hong Kong is the third largest incoming hub with the major traffic flow from Tokyo (12.5), and lesser flows from Guam (2.6) and Manila (1). From Hong Kong traffic moves out to Singapore (2), Bangkok (.6), and Taiwan (1.3).

Guam acts as the smallest hub with inbound traffic from Honolulu (4.2) and Tokyo (1.4) and outbound flows to Manila (.5), Hong Kong (2.6) and Taiwan (1.5). Additional regional service, which has not been included on this diagram, is also provided by Pacific carriers.

Passenger Traffic

Since almost all of the equipment being used on these routes consists of wide-bodied jets, a heavy flow of passengers also moves from the West Coast gateways to Pacific destinations. To investigate the passenger flow, Table 4 is based on United States immigration records of United States citizens. The table excludes the movement of aliens from the United States.

The immigration records note the port of departure as the location at which customs and immigration clearance is performed. This made it necessary to include Honolulu since flights that originate at Los Angeles/San Francisco may clear customs in Hawaii. The Honolulu passenger total may also include passengers originating at other West Coast origins.

Travel by United States citizens from these departure ports to Pacific destinations increased by 13 percent in 1977, 14 percent in 1978, a cumulative increase of 29

TABLE 4

U.S. CITIZEN TRAVEL TO PACIFIC DESTINATIONS

U.S. Port of Departure	Destination	1976 Travelers	Percentage of Total Departures	1977 Travelers	Percentage of Total Departures	1978 Travelers	Percentage of Total Departures	3-Year Total by U.S. Port and Destination	Percentage Increase 1976-78
	Pacific	189,824	47	207,667	46	204,376	39	601,867	8
Honolulu	South Pacific-Oceania	83,649	20	83,713	18	103,513	20	270,875	24
	Pacific	17,002	4	32,369	7	46,615	9	95,986	174
Los Angeles	South Pacific-Oceania	39,481	10	49,333	11	76,057	14	164,871	93
	Pacific	73,698	18	75,579	17	92,241	18	240,518	25
San Francisco	South Pacific-Oceania	510	—	7,492	2	1,036	—	9,038	103
Annual Total		403,164		456,153		523,838		1,383,155	29

Destinations

Pacific: Hong Kong, Indonesia, Japan, South Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand
South Pacific-Oceania: Australia, New Zealand, Pacific Islands

Note: Percentages have been rounded and may not add to 100 percent.
Source: U.S. Department of Transportation, U.S. International Air Travel Statistics.

percent during the 1976-1978 period. The salient factor for this study is the impressive increase in passengers who used the Los Angeles gateway during the period. This departure port, which is the most accessible port to Arizona residents, recorded a 174 percent increase in outbound passengers to Pacific destinations, and a 93 percent increase to South Pacific-Oceania locations. Los Angeles is accounting for an increasing share of total departures into the Pacific, representing 14 percent in 1976, 18 percent in 1977, and 23 percent in 1978.

REGULATION AND CONTROL OF AIR TRANSPORTATION

Bilateral agreements between governments, many of which are based on the 1946 Bermuda Agreement between the United States and Britain, have become the norm. These agreements establish the number of carriers from each nation serving a route and the city/airport which these carriers will use. Until recently when charter and freight have also been included, these agreements were limited principally to scheduled passenger service.

The second regulatory device of cooperation and consensus in international air transportation is represented by the International Civil Aviation Organization (ICAO), dealing with airport and traffic control/safety-related aspects; and, the International Air Transport Association (IATA) dealing with the economic and business aspects of international air transportation.

IATA is probably best known for its Traffic Conferences that establish the rate structure of international air service. After adoption by IATA, approval is required by the appropriate authority of each nation involved in the rate agreement. This gives the Civil Aeronautics Board (CAB) in the United States considerable power over international air rates.

The CAB has another power which is of even greater importance to international air transportation. Antitrust law prohibits any discussion that results in price fixing or places undue restraint on competition unless exempted. The CAB has granted immunity under antitrust law to carriers participating in IATA ratemaking but has it within its power to withdraw this immunity. Without going into detail, it is well known that Congress and the CAB have moved towards more competition in air transportation domestically in the last two years. This same philosophy is now being felt in CAB actions concerning international air transportation.

The CAB's advocacy of increased competition spread to the international arena and was manifested in two ways. First, joined by the Departments of State and Transportation, a move began to effect more liberal bilateral agreements. Several nations who are linked to the United States by North Atlantic routes entered into the agreements, which have few restrictions on schedule frequency or capacity.

Pacific nations followed suit. Australia, Korea, New Zealand and Singapore have accepted the United States posture toward increased competition. Singapore International Airways has recently inaugurated service to San Francisco, joining other Pacific carriers — Air New Zealand, Qantas, China (Taiwan), Japan, Korean, and Philippine Airlines — presently serving the Los Angeles/San Francisco gateways.

As more foreign carriers are granted landing rights at United States gateways, additional domestic carriers are adding to the Pacific service already being provided by Flying Tiger, Northwest, and Pan Am. Braniff has begun Los Angeles-Honolulu service; twice weekly this flight will continue on to Guam and Hong Kong.[12] Continental Airlines has extended its Los Angeles-Honolulu flights westward to Guam and Taipei, and south to Sydney. Full freighter service will also be inaugurated by Continental on the Taipei route. Proposals for additional Pacific routes have been made by Northwest, Trans International, United, and World Airways.

One Pacific nation, Japan, has been unwilling to accept the laissez faire philosophy and has not acquiesced to the United States stance. The current air transport agreement with Japan was reached in 1952, when the occupation was ending, and Japan Air Lines was essentially a domestic carrier. During the interim, the carrier's growth has paralleled that of the Japanese economy.

Negotiations began in November, 1977, but seem to have only defined the differences between the two nations which have impeded development of a new agreement. Japan does not perceive the Pacific market as being ready for a plethora of discounts, while the United States is advocating low fares. Japan Air Lines is seeking a more competitive position in the United States market by providing service to additional gateways and the extension of fifth freedom rights. Both passenger charter and scheduled freighter service have also been points of contention.

Two other developments are affecting the regulation of air transportation in the Pacific: country-of-origin pricing and withdrawal of antitrust immunity. The United States is advocating country-of-origin pricing which permits approval of a route's fare structure by the nation generating the traffic flow. Under this concept, a United States carrier's fare proposals are submitted directly to the CAB eliminating the need for intermediate carrier discussion on the involved point-to-point rates.

Second, scrutiny of IATA functions led the CAB to issue a show cause order in June, 1978, which could result in rescinding the antitrust immunity presently granted to IATA Traffic Conference negotiations. This action would effectively preclude United States carrier participation in IATA ratemaking and weaken the organization's position. Of the eighty-nine active members of IATA at the end of 1978, ten were United States carriers despite the prior resignations of Continental, Northwest, Seaboard, and Western. The recent resignations of Delta and Pan Am have further reduced the United States carrier participation.

The IATA leadership reacted to the CAB's order by forming an ad hoc executive committee which was to plot the organization's future course. The 1978 general meeting accepted the restructuring of IATA functions. The trade association activities, in which all carrier members participate, have been separated from the ratemaking of the traffic conferences, in which members' participation is discretionary. Interim approval of the ratemaking function has been granted by the CAB pending final action on the order, which has been postponed until October, 1979.[13]

It seems safe to say that the regulation of international air transportation in the Pacific Basin is in a state of flux and uncertainity.

NEW PACIFIC MARKETS: MAINLAND CHINA

With recognition of Mainland China, officially called the Peoples Republic of China (PRC), the situation in the Pacific may be subject to considerable change. First, a bilateral agreement must be negotiated. A wide disparity in the views of the two nations, especially as to the number of carriers, may become evident.

The PRC's jet airline fleet, which is presently limited to about fifty narrow body, short and medium range aircraft will be enhanced by three Boeing 747SPs, designed for long-range routes. It is expected that the SPs will serve a westbound route from Peking to Paris, and eastbound, via Tokyo to Los Angeles and New York City.

Pan American Airways, Northwest Orient Airlines, and TransWorld Airlines served China prior to the

disruption in diplomatic relations thirty years ago and have dormant route authority. Each carrier has requested the CAB's approval of renewed service to Peking, Shanghai and Canton from several United States gateways. These applicants have been joined by United Airlines, World Airways, and Trans International Airways as new applicants for United States-China routes.

If service were initiated by even one-half of the applicants, a distinct imbalance would ensue between Chinese and United States carriers serving the routes. Even if China does not object to the preponderance of United States carrier service on the route, extensive development of visitor facilities would be required to sustain it.

China is looking toward the expansion of tourism as a means of generating foreign currency earnings, which in turn can serve to offset the very heavy cost of the proposed modernization program. The existing airport and hotel facilities cannot handle a burgeoning tourist influx. It would seem that the United States views on

Most of the PRC's airports will require modernization, for they do not now meet international standards. The Canton, Peking, and Shanghai facilities have 10,000 foot runways that are capable of handling wide-bodied jets, and are adequate for the present volume of traffic. China is currently receiving air service (noncommunist) by Air France, Ethiopian Airlines, Iran Air, Pakistan International, and Swissair. Airport improvement is apparently a top priority item, for a memorandum of understanding has been signed with a consortium of United States firms that involves the purchase of $75 million of air traffic control equipment.[14]

While tourism is the primary focus of planned expansion of hotel accommodations, the availability of first-class accommodations will add a dimension of pleasure to business travel. Construction is now underway at Shanghai, Soochow, and Nanking. Preliminary arrangements for the construction of 5,000 motel rooms, at a cost of $5 million, were announced a few months ago. Since then, plans have been tempered by the reality of paying for the development of the tourism infrastructure. A more moderate approach seems likely, but tourism should retain a priority status.

Even limited flight schedules of wide-bodied equipment during the period of market development would provide substantial air freight capacity. Growth in the passenger market should presage economic development, which will lead to an increase in trade between the United States and PRC in the type of products usually transported by air. Trade between the two nations has tripled from $374 million in 1977, to an estimated $1.2 billion in 1978, and is expected to total $10 to $12 billion through 1985.[15]

CONCLUSION

Air transportation is a growing and integral part of the international business scene of America. The Pacific region leads in that growth in both passenger and freight service, a development that is of prime importance to the dynamic and growing Southwest which is increasingly looking toward the Far East.

As this growth and development continues, the services offered by international air carriers (both domestic and foreign) will also increase. The profile of freight and passenger air transportation presented here indicates an already developed base upon which the future growth will rest. The opening of new markets (such as Mainland China) presage major changes in the years ahead in spite of many present physical, political and regulatory difficulties. Built upon the already expanding base of Pacific trade, these new developments could have considerable impact on Arizona and all Southwestern states.

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[1]A portion of Mexican, Central American, and South American trade moves through West Coast Customs.

[2]U.S. Dept. of Commerce, Statistical Abstract of the United States, 1978, p. 885.

[3]Ibid.

[4]Ibid., p. 673. Percentage calculated.

[5]Ibid.

[6]Ibid.

[7]*Far Eastern Economic Review*, March 23, 1979, p. 94.

[8]*Aviation Week and Space Technology*, April 16, 1979, p. 30.

[9]This term is expressed as a percentage of available seats on an aircraft that must be occupied by revenue passengers in order to cover the full cost of the flight. No operating profit is implied.

[10]*U.S. International Air Freight Traffic 1973-1977*, United States Civil Aeronautics Board, p. 34.

[11]Ibid., p. 1.

[12]Braniff has most recently announced their intention to expand their routes into several additional Pacific destinations including Manila, Singapore, Seoul, and Bangkok.

[13]There seems to be some reason to feel that antitrust immunity may continue. At this writing, hearings have been concluded but no decision rendered. "CAB is likely to Ease Plan for Ending Its Approval of IATA Fare-setting Plan," *Wall Street Journal*, October 30, 1979, p. 10.

[14]*Honolulu Advertiser*, April 12, 1979, p. B-4.

[15]*Newsweek*, May 28, 1979, p. 72.

Doctoral Dissertation Abstract

COLLEGE OF BUSINESS ADMINISTRATION
ARIZONA STATE UNIVERSITY

Editor's Note: *Our readers are often interested in research undertaken by doctoral candidates in the College of Business Administration at Arizona State University. Therefore, we occasionally include one or two abstracts of doctoral dissertations in* Arizona Business. *Readers who wish further information on any of these subjects may examine the complete dissertations in the ASU Hayden Library.*

AN ANALYSIS OF RELATIVE POWER AMONG PARTICIPANTS IN THE PURCHASE OF INDUSTRIAL COMPONENTS

James Richard Cooley

The purpose of the research upon which this dissertation is based was to investigate the power (influence) relationships among participants in purchasing industrial components. Further, power structures were studied to discover if they varied in relation to characteristics of the products being purchased.

Based on the literature of the industrial purchasing process, the buying decision was divided into two stages: the product selection and the supplier selection. Measurements of power were taken for each stage. Respondents allocated 100 points among the functions of purchasing, production, engineering, and a general category for all others according to the amount of influence they felt each function had in each of two decision stages. The situation was specified as a modified rebuy for fasteners, castings, and electronic components.

Six product characteristics were examined for their effects on power structures: (1) Degree of technical complexity, (2) Amount of after-purchase modification, (3) Amount of after-purchase installation, (4) Degree of similarity among products, (5) Rate of product improvements, (6) Degree of similarity among suppliers. The factors were measured on a five-level scale representing the amount of each factor present for a specified product.

Personal interviews were conducted with 122 respondents from twenty-six industrial manufacturing firms in Arizona and California. The questionnaire was completed by personnel from purchasing, production, and engineering. Multivariate analysis of variance (Manova) was used to test the hypotheses, with the level of significance set at .05.

It was found that the distribution of power among the functions is different for the two decision stages with engineering dominating the product selection and purchasing dominating the supplier selection. The research data did not support the usefulness of product factors in identifying different power relationships and, therefore, have limited value in providing insights into power distributions within buying firms for modified rebuys of the industrial components specified. In the product selection decision, only the technical complexity and installation factors identified differing power structures. Purchasing had more power in selecting simple products or ones requiring minimal installation. In the supplier selection decision, the amount of modification of the product and the similarity of suppliers of a component identified different power structures, but there was no discernable pattern across the levels of the factors.

It was found that purchasing has significantly more power in firms with 1,000 or less employees and in firms that manufacture to stock rather than to customer order. It was also found that there were significant differences in the power perceptions of the respondents based on their occupation. Each group saw themselves as having more power than did others but all groups agreed on the ranking of power among the functions.

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The Arizona Business Scene

Arizona Copper — Improving Conditions in a Key Industry

Although Arizona is commonly known as "The Copper State," few Arizonans realize the major national and international importance of this key industry. Arizona copper mines have been the nation's top producers since 1910, and the state currently produces two-thirds of all copper mined in the United States, as shown in Table 1. Mine production from Arizona alone exceeds that of any nation except the Soviet Union or Chile. Copper production from the leading mining nations is given in Table 2.

TABLE 1

UNITED STATES COPPER MINE PRODUCTION — 1978
(Tons)

State	*Production*	*Percent*
Arizona	979,538	65.8
Utah	204,957	13.7
New Mexico	141,116	9.5
Montana	75,106	5.0
Nevada	20,983	1.4
All other	68,585	4.6
Total	1,490,235	100.0

Source: Arizona Mining Association and American Bureau of Metal Statistics. Units are short tons of recoverable copper.

TABLE 2

LEADING COPPER MINING NATIONS — 1978
(Tons)

Country	*Mine Production*
United States	1,490,235
USSR	1,212,500
Chile	1,145,100
Canada	724,793
Zambia	758,800
Zaire	463,700
Peru	371,300
Poland	319,700
Philippines	290,372
South Africa	214,100

Source: Arizona Mining Association and American Bureau of Metal Statistics.

Copper ore is mined to some degree in several Arizona counties with the primary mines located in the east, southeast, and southern portions of the state. Arizona mine production of recoverable copper has averaged about 910,000 tons per year since 1970 years; recent historical production figures are listed in Table 3. Mine operation is diversified, with about a dozen major companies operating two dozen important

mine complexes. Locations like Morenci, San Manuel, Twin Buttes, Sierrita, and New Cornelia may not be recognized by the average urban dweller in Arizona, but would immediately be recognized by the international mining community as sources of major copper production.

TABLE 3

COPPER MINE PRODUCTION IN ARIZONA
(Tons)

Year	*Production*
1978	979,538
1977	923,778
1976	1,024,421
1975	813,211
1974	858,783
1973	927,271
1972	908,612
1971	820,171
1970	917,918

Source: American Bureau of Metal Statistics and Bureau of Mines, U.S. Dept. of Interior. Units are short tons of recoverable copper.

The days of rich, high-grade ores with copper contents of up to 10 percent are gone, requiring the industry to innovate and develop techniques for extracting copper from ores with copper contents as low as a fraction of 1 percent. According to the Arizona Mining Association, a typical mine will haul two tons of rock to obtain one ton of ore which eventually will yield ten pounds of copper. Substantial reserves of copper ore exist in the state, and industry concern is expressed over the withdrawal of some of these lands into wilderness or other designations which preclude exploration and mining. Other industry concerns deal with increasing government regulations, environmental controls, and taxes.

Major by-products of copper mining include molybdenum, gold, and silver. Higher prices for these other metals have helped increase the value of mine output in recent years. Value of copper mined in 1978 totaled $1.3 billion, with the value of by-products adding another $200 million. Although data for 1979 have yet to be released, higher production and prices for both copper and copper by-products should result in a sharply higher total value over 1978.

Copper is a basic metal with many uses. It conducts electricity better than any other common metal, is an excellent heat conductor, is nonmagnetic, resists corrosion, and alloys readily with other metals. The most common uses are in electrical and electronics products, industrial machinery and equipment, and in a wide variety of consumer and transportation products. The United States often consumes more copper than is domestically mined. The difference is made up by recovery from recycling previously used copper and by importing copper from other countries.

After four years (1975 to 1978) of prices averaging 66 cents per pound, the copper industry received a welcome boost in 1979 as prices rapidly moved upward and finished the year at over $1.00 per pound. Since the cost of living in general has doubled since 1970, the real return per pound has changed very little. Annual average copper prices are shown in Table 4.

Copper is an internationally traded commodity and prices are sensitive to international politics and economic conditions. Much of the world supply comes from controlled economies such as the Soviet Union, where production is not just a matter of supply and demand, but also a response to political and strategic considerations. In addition, the countries of Chile, Peru, Zambia, Zaire, Australia and Papua (New Guinea) recently formed the International Council of Copper Exporting Countries (CIPEC). The Council controls a major portion of the world export market and may become a major factor in future copper price movements. The Arizona copper industry, therefore, will increasingly be at the mercy of economic and political forces external to the United States.

TABLE 4

COPPER PRICES
(Cents Per Pound)

Year	*Price*
1979*	104.0
1978	66.5
1977	65.8
1976	68.8
1975	63.5
1974	76.6
1973	58.9
1972	50.6
1971	51.4
1970	57.7

*December 28, 1979 price as quoted in the *Wall Street Journal*

Source: American Bureau of Metal Statistics

The total value of the copper industry to the state is difficult to estimate. A recent study by the Southwest Economic Information Center, however does attempt to develop such a total. The study estimates the total im-

pact of copper mining and refining on the state's economy at $5.6 billion in 1978. This total included $930 million in direct income and $4.7 billion in estimated indirect income to individuals, businesses, and government. The major direct income category was nearly $380 million in wages and salaries paid to the industry's employees. The same report estimated that the industry provided, both directly and indirectly, a total of almost $439 million to support state and local governments in Arizona. With prices on an upward swing, the Arizona copper industry in 1979 certainly had a greater impact on the state's economy than ever before.

Direct employment in Arizona copper mines and smelters has averaged 20,600 workers over the last ten years as indicated in Table 5. To this figure must be added another 3,000 to 4,000 workers involved in exploration, smelters, refining, and other aspects of the mining industry. While total employment has remained relatively stable, wages have moved up steadily, with weekly earnings in 1979 averaging over $400 per worker.

At a time of global scarcities of strategic materials, the Arizona copper industry is assuming even greater importance, not only to the state's economy, but to the nation as well. The decade of the 1980s will likely be a decade of intense international economic activity, and Arizona copper will remain a key state product of continued high demand.

TABLE 5

AVERAGE DIRECT COPPER MINE EMPLOYMENT IN ARIZONA

(Number of Workers)

Year	*Employment*
1979*	20,200
1978	17,100
1977	19,200
1976	21,700
1975	22,500
1974	24,600
1973	22,600
1972	20,500
1971	18,900
1970	18,800

*November, 1979

Source: Arizona Dept. of Economic Security. Figures are total wage and salary employees in copper mining. Totals do not include an estimated 3,000 to 4,000 additional workers in exploration, smelting, refining, and related fields.

ARIZONA SALES OF ELECTRICAL POWER

By Months

(In millions of kwh)

	Actual		*Percent Change Current Month From*	
	1979	*1978*	*Same Month Previous Year*	*Previous Month*
November	1,849.3	2,047.8	+ 10.7	- 9.6

Source: Based on reports from major suppliers.

A Survey of Arizona Business Conditions

HAROLD FEARON

The clouds of a recession are now evident, but the indicators of economic activity still remain positive, on the whole, according to results from the year-end monthly business survey of the Purchasing Management Association of Arizona. The rates of increase have slowed substantially from the earlier months of the year, and the key indicator of new orders received from customers actually turned negative for the first time in the past three years. Prices continued to go up at an unacceptably high rate, with no moderation yet in sight. But delivery time on shipments from vendors, production, and employment continued to increase in December, although at the lowest rates so far this year. Inventory levels of purchased materials went up, but at a moderate rate, showing that firms' stock positions continue on the lean side, which should cushion the effects of any downswing and make it short in duration.

The Purchasing Management Business Survey now is in its eighteenth year of monthly reporting on the health of the Arizona economy. Data are gathered through a questionnaire sent at the close of each month to purchasing managers throughout the state. They report whether performance on six key indicators of economic performance increased, decreased, or remained the same compared to the previous month. Since these purchasing managers deal with market forces on a daily basis, they can provide a timely and accurate picture of current business trends.

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Prices paid for major purchasing items continued to rise rapidly in December, although the rate of increase was slightly less than during the first half of the year. Higher prices were reported by 73 percent of the purchasing managers; 27 percent said prices were unchanged; and no one paid lower prices in December than in November. Although around the midpoint of 1979 it appeared that the rate of price hikes might be diminishing somewhat, that trend was short lived, and the net monthly change on the price indicator has gone up at an increasing rate in each of the past two months. Unfortunately, no major relief on the price scene is presently in sight, and inflation will remain a problem during the new year.

Delivery time on shipments from vendors continued to stretch out, as has been the case in each month of 1979, although the net increase rate was the lowest in almost two and a half years (since June, 1977). Longer lead times were reported by 41 percent of the respondents, which was over three times greater than the 12 percent who received faster delivery from their vendors. This shows that the business of vendors to Arizona firms remains strong, even though it may not be increasing quite as rapidly as earlier in 1979.

Inventory levels of purchased materials went up again in December and at twice as great a rate as in the previous month: 30 percent of the firms added to inventory; 19 percent reduced stocks. Still, the December net increase was the fourth smallest during 1979. This avoidance of excessive inventory buildup should prevent any severe economic downturn and make a reversal, if it does help, shallow and of short duration.

New orders received from customers decreased in December for the first time in three years (since December, 1976). A higher new order rate was reported by 28 percent of the firms, but this was offset by the larger 32 percent who reported their firm booked less new business in December than in November. This was the largest net new order decrease since June, 1975, and only the seventh decrease in the past five years. While the new order indicator was showing large increases during the first half of the year, the increase in order backlogs turned sluggish in the third quarter and posted only marginal increases in October and November. This shows that Arizona's growth rate has slowed substantially over the second half of the year and it likely will result in only small increases, or even net decreases, in both production and employment in the initial months of the new year.

Production went up again, for the forty-eighth consecutive month: 30 percent of the firms increased production in December over November, compared to 25 percent who reduced output. However, this was the smallest net increase since November, 1977, and is a reflection of the reduction in order backlogs. This indicator very likely will turn negative in either January or February.

Employment increased again in December, also for the forty-eighth consecutive month, which shows that the current economic upswing has been with us for a long time. Higher employment was reported by 20 percent of the firms, while 11 percent pared payrolls. This was the smallest net increase in almost two years (since January, 1978), again providing evidence that the Arizona economy has reached a plateau and now may experience some months of no growth or even a slight downswing.

The special question, asked each December, covering *anticipated* expenditures for new plant and equipment during 1980 indicates that the major step-up in investment that has occurred during 1979 will continue into the new year. This marks the fifth straight year of an upward trend in expectations, which began in December, 1975, and should provide a source of economic strength that will moderate the effects of any downswing and make it of short duration.

When asked to compare capital expenditures *anticipated for 1980* with those actually made in 1979, 54 percent said their firm would spend more; 29 percent expect no change; and 17 percent forecast a decline. These figures are almost equal to those of a year earlier. The results from this special question over the past six years are shown in Table 1.

TABLE 1

ANTICIPATED CAPITAL EXPENDITURES, 1975 -1980

Expenditures anticipated for new plant and equipment	*Percentage*		
	Higher	*Same*	*Lower*
1980 compared to 1979	54	29	17
1979 compared to 1978	55	28	17
1978 compared to 1977	54	30	16
1977 compared to 1976	48	37	15
1976 compared to 1975	41	28	31
1975 compared to 1974	21	31	48

Source: Survey of the Purchasing Management Association of Arizona

So far, the contraction in the Arizona economy has been slight. If this is the beginning of a recession, it is developing very slowly. Nevertheless, economic performance is gradually slipping, and the first quarter of the new year likely will see a further softening in economic performance. However, the deterioration should be of minor magnitude, for there does not appear to be any inventory overhang which could plunge the Arizona economy into another major recession as that which occurred five years ago.

The Arizona economy reached new high ground in 1979, with growth occurring in all sectors at a moderate but consistent pace. The 1980s will start from a high plateau, and the chance of any major downturn before the economy resumes its normal growth trend is slight. The anticipated capital expenditures in 1980 also will cushion the effects of any downturn and provide a major impetus to economic growth.

The results of the December purchasing survey are shown in Table 2:

TABLE 2

DECEMBER PURCHASING SURVEY

Key Indicators	*Percent of Purchasing Managers Indicating Each Response (December compared to November)*		
	Higher	*Same*	*Lower*
Prices paid for major commodities	73	27	0
Delivery time from vendors	41	47	12
Purchased materials inventory level	30	51	19
New orders received	28	40	32
Production	30	45	25
Employment	20	69	11

Source: Survey of the Purchasing Management Association of Arizona

NOVEMBER, 1979

Arizona Building Permits: Monthly Report

CENSUS DIVISION	RESIDENTIAL Number of Permits	RESIDENTIAL Dollar Value	COMMERCIAL Number of Permits	COMMERCIAL Dollar Value	INDUSTRIAL Number of Permits	INDUSTRIAL Dollar Value	OTHER Number of Permits	OTHER Dollar Value	TOTAL Number of Permits	TOTAL Dollar Value
APACHE COUNTY	5	9,000	—	—	—	—	—	—	5	9,000
Eagar	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
St. Johns	2	N/C	—	—	—	—	—	—	2	N/C
Springerville	—	—	—	—	—	—	—	—	—	—
Unincorporated Apache County	1	9,000	—	—	—	—	—	—	1	9,000
COCHISE COUNTY	125	2,135,700	3	887,000	—	—	66	232,839	194	3,255,609
Benson	1	5,000	—	—	—	—	2	10,000	3	15,000
Bisbee	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Douglas	15	80,820	—	—	—	—	3	1,600	18	82,420
Huachuca City	6	4,313	—	—	—	—	—	—	6	4,313
Sierra Vista	50	351,737	1	35,000	—	—	28	140,139	79	526,876
Tombstone	2	33,000	1	25,000	—	—	—	—	3	58,000
Unincorporated Cochise County	62	1,628,900	—	—	—	—	11	77,200	73	1,706,100
Willcox	9	34,000	1	827,000	—	—	2	3,000	12	864,000
COCONINO COUNTY	80	2,211,624	3	86,102	1	105,000	24	75,901	108	2,478,627
Flagstaff	53	1,283,695	2	84,102	1	105,000	8	23,295	44	1,496,090
Fredonia	—	—	—	—	—	—	—	—	—	—
Page	7	43,900	—	—	—	—	6	8,650	13	52,550
Unincorporated Coconino County	37	882,031	—	—	—	—	10	43,956	47	925,987
Williams	3	2,000	1	2,000	—	—	—	—	4	4,000
GILA COUNTY	86	1,205,050	11	261,296	—	—	32	803,830	129	2,268,176
Globe	6	53,500	5	115,032	—	—	—	—	11	168,532
Hayden	—	—	—	—	—	—	—	—	—	—
Miami	7	60,944	—	—	—	—	—	—	7	60,944
Payson	26	218,718	2	20,764	—	—	22	183,830	50	423,312
Unincorporated Gila County	47	869,888	4	125,500	—	—	10	620,000	61	1,615,388
GRAHAM COUNTY	51	321,710	2	9,000	—	—	1	2,000	54	332,710
Pima	4	83,495	—	—	—	—	—	—	4	83,495
Safford	9	43,000	2	9,000	—	—	—	—	11	52,000
Thatcher	5	6,670	—	—	—	—	—	—	5	6,670
Unincorporated Graham County	13	188,545	—	—	—	—	1	2,000	14	190,545
GREENLEE COUNTY	1	1,000	—	—	—	—	—	—	1	1,000
Clifton	—	—	—	—	—	—	—	—	—	—
Duncan	—	—	—	—	—	—	—	—	—	—
Unincorporated Greenlee County	1	1,000	—	—	—	—	—	—	1	1,000
MARICOPA COUNTY	1,907	39,592,724	259	54,005,104	56	10,507,526	1,802	25,763,180	4,024	109,868,534
Avondale	1	1,000	2	8,000	—	—	9	18,800	12	27,800
Buckeye	4	9,800	—	—	—	—	1	1,500	5	11,300
Chandler	71	905,385	6	104,575	1	40,000	133	263,470	211	1,313,428
El Mirage	—	—	—	—	—	—	—	—	—	—
Gila Bend	1	18,000	—	—	—	—	1	1,500	2	19,500
Gilbert	13	425,900	2	2,600	1	8,000	29	71,502	45	508,002
Glendale	105	1,634,000	22	961,200	—	—	204	7,103,810	331	9,699,010
Goodyear	2	8,800	—	—	—	—	8	12,387	10	21,187
Guadalupe**	6	13,601	—	—	—	—	—	—	6	13,601
Mesa	160	2,940,811	34	14,946,223	2	2,427,000	298	4,757,730	494	25,071,764
Paradise Valley	9	582,230	—	—	—	—	40	375,736	49	957,966
Peoria	42	358,700	—	—	1	1,600	18	52,140	61	412,440
Phoenix	562	14,698,639	137	10,927,910	19	2,827,526	625	8,919,989	1,343	37,374,064
Scottsdale	154	5,352,082	13	2,321,721	—	—	241	1,268,206	408	8,942,009
Surprise	1	1,500	—	—	—	—	1	30,000	2	31,500
Tempe	98	1,441,900	23	5,049,300	32	5,203,400	30	585,100	183	10,279,700
Tolleson	3	2,300	—	—	—	—	2	8,355	5	10,655
Unincorporated Maricopa County	654	11,084,100	21	1,527,875	—	—	159	2,287,155	834	14,899,130
Wickenburg	8	85,508	—	—	—	—	—	—	8	85,508
Youngtown	13	28,470	1	155,700	—	—	3	5,800	17	189,970

Arizona Building Permits: Monthly Report (Continued)

NOVEMBER, 1979	RESIDENTIAL* Number of Permits	RESIDENTIAL* Dollar Value	COMMERCIAL Number of Permits	COMMERCIAL Dollar Value	INDUSTRIAL Number of Permits	INDUSTRIAL Dollar Value	OTHER Number of Permits	OTHER Dollar Value	TOTAL Number of Permits	TOTAL Dollar Value
MOHAVE COUNTY	456	5,262,078	12	751,488	—	—	89	603,378	557	6,616,944
Kingman City	23	208,246	2	34,300	—	—	12	15,532	37	258,078
Kingman Area	73	645,381	1	53,766	—	—	14	26,166	88	725,257
Lake Havasu City	70	2,194,699	6	573,476	—	—	13	524,586	89	3,292,761
Lake Havasu Area	19	198,136	—	—	—	—	9	13,400	28	211,536
Mohave Valley North	170	1,321,530	2	53,952	—	—	22	10,251	194	1,385,733
Mohave Valley South	62	452,038	—	—	—	—	7	5,467	69	457,505
Dolan Springs	19	100,844	—	—	—	—	8	4,778	27	105,622
Sacramento Valley	15	99,306	1	36,000	—	—	3	1,248	19	136,554
Mohave County General	5	41,898	—	—	—	—	1	2,000	6	43,898
NAVAJO COUNTY	74	1,366,256	8	175,150	—	—	5	1,500	87	1,542,906
Holbrook	3	78,500	—	—	—	—	—	—	3	78,500
Show Low	6	33,608	1	113,400	—	—	3	30	10	147,038
Snowflake	2	N/C	—	—	—	—	—	—	2	N/C
Taylor	4	88,000	1	N/C	—	—	—	—	5	88,000
Unincorporated Navajo County	54	992,148	2	21,750	—	—	—	—	56	1,013,898
Winslow	5	174,000	4	40,000	—	—	2	1,470	11	215,470
PIMA COUNTY	804	15,602,576	131	16,062,732	—	—	281	4,273,826	1,216	35,939,134
Marana	—	—	—	—	—	—	—	—	—	—
Oro Valley	5	95,531	1	850	—	—	—	—	6	96,381
South Tucson***	33	264,374	9	22,200	—	—	3	6,965	45	293,539
Tucson	189	2,731,374	99	11,166,382	—	—	151	3,212,011	439	17,109,767
Unincorporated Pima County	577	12,511,297	22	4,873,300	—	—	127	1,054,850	726	18,439,447
PINAL COUNTY	87	928,132	1	85,000	—	—	33	32,733	121	1,045,865
Casa Grande	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Coolidge	14	33,388	—	—	—	—	—	—	17	33,388
Eloy	3	50,000	—	—	—	—	4	6,368	7	56,368
Florence**	10	115,500	1	85,000	—	—	10	13,050	21	213,550
Kearny	3	6,000	—	—	—	—	1	1,000	4	7,000
Mammoth	1	5	—	—	—	—	—	—	1	5
Superior	3	2,000	—	—	—	—	—	—	3	2,000
Unincorporated Pinal County	53	721,259	—	—	—	—	15	12,315	68	733,574
SANTA CRUZ COUNTY	21	400,780	2	40,000	—	—	12	116,616	35	557,396
Nogales	10	42,665	—	—	—	—	7	78,308	17	120,973
Patagonia	1	8,000	—	—	—	—	—	—	1	8,000
Unincorporated Santa Cruz County	10	350,115	2	40,000	—	—	5	38,308	17	428,423
YAVAPAI COUNTY	254	4,931,493	6	4,388,964	1	26,000	83	262,169	344	9,608,626
Chino Valley	3	53,600	2	30,000	—	—	1	20,000	6	103,600
Clarkdale	4	106,000	—	—	—	—	1	200	5	106,200
Cottonwood	13	145,230	2	4,276,500	1	26,000	4	10,280	20	4,458,010
Jerome	—	—	—	—	—	—	—	—	—	—
Prescott	60	384,507	1	50,464	—	—	50	81,614	111	516,585
Unincorporated Yavapai County	174	4,242,556	1	32,000	—	—	27	150,075	202	4,424,431
YUMA COUNTY	189	3,331,280	14	392,162	—	—	27	1,424,959	230	5,148,401
Parker	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Somerton	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Unincorporated Yuma County	123	2,108,871	11	354,243	—	—	2	21,164	136	2,484,278
Wellton	—	—	—	—	—	—	—	—	—	—
Yuma	66	1,222,409	3	37,919	—	—	25	1,403,795	94	2,664,123
TOTAL Maricopa County, November 1979	1,907	39,592,724	259	54,005,104	56	10,507,526	1,802	25,765,180	4,024	109,868,534
TOTAL Maricopa County November 1978	3,362	81,618,371	204	21,694,400*	34	2,844,981	1,587	26,365,315	5,187	132,523,067
PERCENT CHANGE	-43	-51	27	57	65	269	14	-2	-22	-17
TOTAL Arizona, November 1979	4,118	77,297,473	452	57,143,998	58	10,638,526	2,455	33,592,931	7,083	178,672,928
TOTAL Arizona, November 1978	6,146	123,846,417	326	34,295,224	45	5,372,281	2,232	30,664,250	8,747	192,178,122
PERCENT CHANGE	-33	-38	39	67	55	215	10	10	-19	-7

N/C: Not collected N/R: No report, data for this month will be combined with data reported for the following month.
*Includes mobile homes **Includes October and November data ***Includes August-November data

Arizona New Housing Starts: Monthly Report

NOVEMBER, 1979

CENSUS DIVISION	BUILDING PERMITS ISSUED: 1* Family	Duplex	3-4 Families	5 or More	Housing Units
APACHE COUNTY	1	—	—	—	1
Eagar	N/R	N/R	N/R	N/R	N/R
St. Johns	—	—	—	—	—
Springerville	—	—	—	—	—
Uninc. Apache Co.	1	—	—	—	1
COCHISE COUNTY	62	—	1	—	66
Benson	—	—	—	—	—
Bisbee	N/R	N/R	N/R	N/R	N/R
Douglas	1	—	—	—	1
Huachuca City	—	—	—	—	—
Sierra Vista	10	—	—	—	10
Tombstone	2	—	1	—	6
Uninc. Cochise Co.	49	—	—	—	49
Willcox	—	—	—	—	—
COCONINO COUNTY	53	—	—	—	53
Flagstaff	19	—	—	—	19
Fredonia	—	—	—	—	—
Page	6	—	—	—	6
Uninc. Coconino Co.	28	—	—	—	28
Williams	—	—	—	—	—
GILA COUNTY	48	—	—	—	48
Globe	1	—	—	—	1
Hayden	—	—	—	—	—
Miami	—	—	—	—	—
Payson	14	—	—	—	14
Uninc. Gila Co.	33	—	—	—	33
GRAHAM COUNTY	13	—	—	—	13
Pima	4	—	—	—	4
Safford	1	—	—	—	1
Thatcher	—	—	—	—	—
Uninc. Graham Co.	8	—	—	—	8
GREENLEE COUNTY	—	—	—	—	—
Clifton	—	—	—	—	—
Duncan	—	—	—	—	—
Uninc. Greenlee Co.	—	—	—	—	—
MARICOPA COUNTY	1,168	15	19	30	2,056
Avondale	—	—	—	—	—
Buckeye	—	—	—	—	—
Chandler	49	—	—	—	49
El Mirage	—	—	—	—	—
Gila Bend	1	—	—	—	1
Gilbert	9	—	—	—	9
Glendale	46	—	—	—	46
Goodyear	—	—	—	—	—
Guadalupe**	1	—	—	—	1
Mesa	126	12	14	5	492
Paradise Valley	5	—	—	—	5
Peoria	7	—	—	—	7
Phoenix	292	2	3	7	570
Scottsdale	114	—	1	2	138
Surprise	—	—	—	—	—
Tempe	44	—	1	15	254
Tolleson	—	—	—	—	—
Uninc. Maricopa Co.	473	—	—	—	473
Wickenburg	1	1	—	—	3
Youngtown	—	—	—	1	8

CENSUS DIVISION	BUILDING PERMITS ISSUED: 1* Family	Duplex	3-4 Families	5 or More	Housing Units
MOHAVE COUNTY	208	—	—	—	208
Kingman City	9	—	—	—	9
Kingman Area	53	—	—	—	53
Lake Havasu City	56	—	—	—	56
Lake Havasu Area	13	—	—	—	13
Mohave Valley North	62	—	—	—	62
Mohave Valley South	21	—	—	—	21
Dolan Springs	5	—	—	—	5
Sacramento Valley	7	—	—	—	7
Mohave Co. General	2	—	—	—	2
NAVAJO COUNTY	59	—	—	—	59
Holbrook	1	—	—	—	1
Show Low	4	—	—	—	4
Snowflake	1	—	—	—	1
Taylor	2	—	—	—	2
Uninc. Navajo Co.	47	—	—	—	47
Winslow	4	—	—	—	4
PIMA COUNTY	570	12	1	5	996
Marana	—	—	—	—	—
Oro Valley	1	—	—	—	1
South Tucson***	4	—	—	—	4
Tucson	61	12	1	5	487
Uninc. Pima Co.	504	—	—	—	504
PINAL COUNTY	39	—	—	—	39
Casa Grande	N/R	N/R	N/R	N/R	N/R
Coolidge	2	—	—	—	2
Eloy	1	—	—	—	1
Florence**	10	—	—	—	10
Kearny	1	—	—	—	1
Mammoth	—	—	—	—	—
Superior	2	—	—	—	2
Uninc. Pinal Co.	23	—	—	—	23
SANTA CRUZ COUNTY	15	—	—	—	15
Nogales	7	—	—	—	7
Patagonia	1	—	—	—	1
Uninc. Santa Cruz Co.	7	—	—	—	7
YAVAPAI COUNTY	160	1	—	—	162
Chino Valley	3	—	—	—	3
Clarkdale	4	—	—	—	4
Cottonwood	9	—	—	—	9
Jerome	—	—	—	—	—
Prescott	11	—	—	—	11
Uninc. Yavapai Co.	133	1	—	—	135
YUMA COUNTY	127	—	2	7	190
Parker	N/R	N/R	N/R	N/R	N/R
Somerton	N/R	N/R	N/R	N/R	N/R
Uninc. Yuma Co.	84	—	—	—	84
Wellton	—	—	—	—	—
Yuma	43	—	2	7	106
TOTAL, Maricopa Co., November 1979	1,168	15	19	30	2,056
TOTAL, Maricopa Co., November 1978	2,074	4	17	19	3,557
PERCENT CHANGE	−44	275	12	58	−42
TOTAL, Arizona, November 1979	2,523	28	23	42	3,906
TOTAL, Arizona, November 1978	4,215	12	27	35	5,448
PERCENT CHANGE	−40	133	−15	20	−28

N/R: No report; data for this month will be combined with data reported for the following month.
*Includes mobile homes. **Includes October and November data. ***Includes August-November data.

Maricopa County Monthly Retail Food Prices

DECEMBER

During December, the Maricopa County Index of Food Consumed at Home rose 2.2 percent from the November index value. This gain follows a November increase of 0.6 percent. The December index value of 231.3 indicates that county shoppers had to pay $23.13 for a similar basket of foodstuffs that would have cost $10.00 in 1967. This food basket could have been purchased for $20.67 one year ago.

The December rise was due to increases in all the subgroups: *Fruits and Vegetables* (6.9 percent), *Meats, Poultry, Fish, and Eggs* (3.1 percent), *Dairy Products* (0.7 percent), *Cereals and Bakery Products* (0.5 percent), and *Other Foods* (0.4 percent).

The gain in the subgroup *Fruits and Vegetables* was a result of seasonal variations in the price of fresh produce. Declines in the price of oranges (-8.9 percent) and bananas (-4.7 percent) were offset by increases for lettuce (38.8 percent), tomatoes (20.5 percent), and apples (15.1 percent), causing the subgroup increase.

Big jumps in the prices of fresh whole chicken (12.1 percent) and eggs (10.0 percent) contributed to the rise in the subgroup *Meats, Poultry, Fish, and Eggs*. Most pork and beef prices were also up, notably bacon (7.8 percent), round roast (7.5 percent), round steak (7.3 percent), and chuck roast (6.1 percent). Prices of canned fish and seafood (4.5 percent) also rose but the increase was partially counteracted by decreased prices for sirloin steak (-4.4 percent), frankfurters (-3.4 percent), and ground beef (-1.3 percent).

The higher index for *Dairy Products* reflects an increase in fresh milk and cream (1.0 percent) and butter (1.3 percent). A jump in the price of cereal (3.0 percent) and fresh cake and cupcakes (2.9 percent) offset declines recorded for flour and prepared flour mixes (-3.9 percent) and fresh biscuits, rolls, and muffins (-2.3 percent), causing the rise in the subgroup *Cereal and Bakery Products*. The increase in the subgroup *Other Foods* was the result of price gains for most items, particularly nuts, potato chips, and other snacks (4.2 percent) and roasted coffee (3.5 percent).

A comparison of the September Food Consumed at Home Index for Maricopa County with index values for four selected metropolitan areas reveals that the outlays required to purchase a foodstuffs group in September, 1979 (obtainable for an outlay of $10.00 at 1967 average prices) were $22.18 in Maricopa County; $23.05 in Los Angeles-Long Beach; $24.15 in San Francisco-Oakland; $23.52 in Chicago-Northwestern Indiana; and $23.47 in the United States (average).

TABLE 1
INDEX FOR FOOD CONSUMED AT HOME
Maricopa County, United States, and Selected Metropolitan Areas
(Average 1967 = 100 percent)

Group	Maricopa County Dec.[a]	Maricopa County Sept.[b]	United States Sept.[b]	Los Angeles-Long Beach Sept.[b]	San Francisco-Oakland Sept.[b]	Chicago-Northwestern Indiana Sept.[b]
Food Consumed at Home	231.3	221.8	234.7	230.5	241.5	235.2
Cereals and Bakery Products	216.3	209.5	225.6	227.9	224.6	228.1
Meats, Poultry, Fish, and Eggs	243.2	233.8	231.0	231.9	239.3	233.3
Dairy Products	205.0	196.9	211.3	197.0	201.2	208.2
Fruits and Vegetables	218.4	204.7	231.8	216.4	250.4	230.3
Other Foods Consumed at Home	249.9	241.1	276.0	272.3	293.5	282.1

[*] Computed from data contained in The Consumer Price Index, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C.

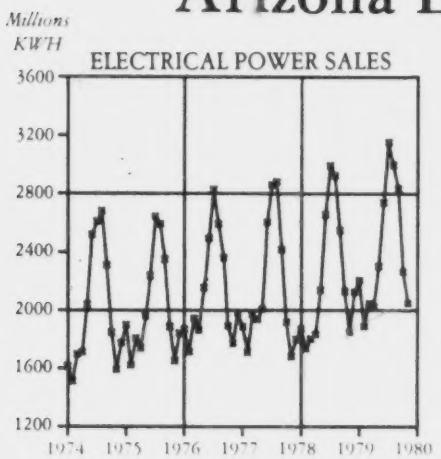
Note: Index Comparisons between Maricopa County and the other regions show only that food prices in Maricopa County have increased more or less than food prices in the other regions since 1967. The indices cannot be used to determine the actual differences in food price levels between the regions.

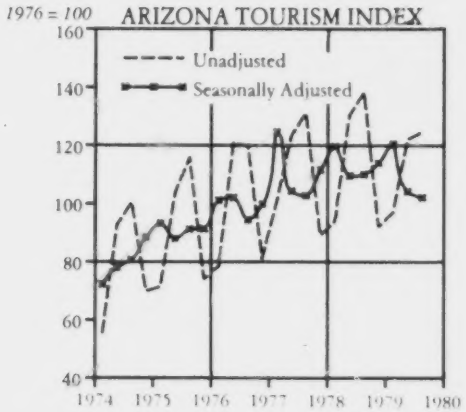
Sources: Bureau of Business and Economic Research, College of Business Administration, Arizona State University, in cooperative cosponsorship with Valley National Bank.

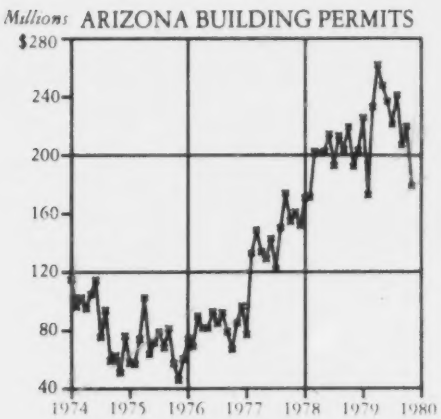
[a]Maricopa County food prices are reported for the month closest to publication.

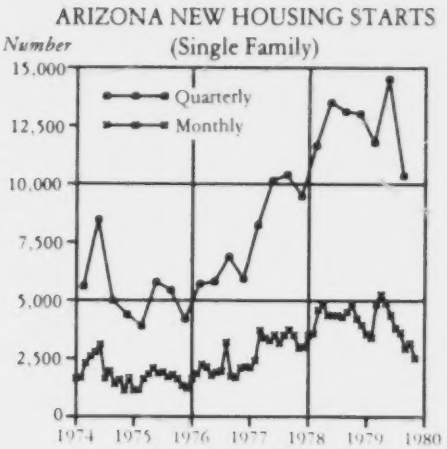
[b]Comparisons of food prices among various cities and the U.S. average are made on the basis of earlier months because of the lag in collecting price reports from these other areas.

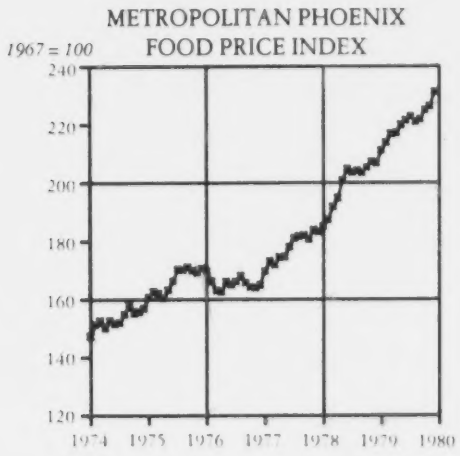
Arizona Economic Indicators

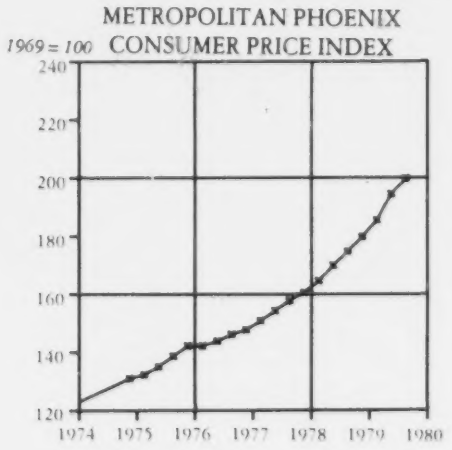












Source: All data compiled by the Bureau of Business and Economic Research, College of Business Administration, Arizona State University.